



GE
159 Plastics Avenue
Pittsfield, MA 01201
USA

Transmitted Via Overnight Delivery

August 26, 2005

Mr. William P. Lovely, Jr.
United States Environmental Protection Agency
EPA New England (MC HBO)
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

**Re: Floodplain GE-Pittsfield/Housatonic River Site
Floodplain Residential and Non-Residential Properties Adjacent to 1½ Mile Reach of
Housatonic River (GECD710 and GECD720)
Removal Design/Removal Action Work Plan for the Phase 4 Floodplain Properties**

Dear Mr. Lovely:

Enclosed for your review is GE's *Removal Design/Removal Action Work Plan for the Phase 4 Floodplain Properties*.

Please call Dick Gates if you have any questions about this report.

Sincerely,

Andrew T. Silfer, P.E.
GE Project Coordinator

Enclosures

V:\GE_Housatonic_Mile_and_Half\Reports and Presentations\Phase 4 RDRA WP\51452196ltr.doc

cc: Dean Tagliaferro, EPA
Rose Howell, EPA*
Holly Inglis, EPA
Tim Conway, EPA
John Kilborn, EPA
K.C. Mitkevicius, USACE
Susan Steenstrup, MDEP (2 copies)
Anna Symington, MDEP*
Robert Bell, MDEP*
Thomas Angus, MDEP*
Joanne Flescher, MDEP*
Nancy E. Harper, MA AG*

Dale Young, MA EOE*
Mayor James Ruberto, City of Pittsfield
Linda Palmieri, Weston
Michael Carroll, GE*
Richard Gates, GE
Rod McLaren, GE*
James Nuss, BBL
James Bieke, Goodwin Procter
Public Information Repositories
GE Internal Repository

** cover letter only*

REPORT

Removal Design/Removal Action Work Plan for the Phase 4 Floodplain Properties

Volume I of III

**General Electric Company
Pittsfield, Massachusetts**

August 2005

Table of Contents

Section	1. Introduction	1-1
	1.1 General	1-1
	1.2 Description of Phase 4 Floodplain Properties	1-2
	1.3 Scope and Format of RD/RA Work Plan	1-3
Section	2. Summary of Pre-Design Activities and Available Soil Data	2-1
	2.1 General	2-1
	2.2 Summary of Pre-Design Soil Investigations	2-1
	2.3 Soil Investigation Summary	2-2
Section	3. Summary of PCB and Appendix IX+3 Performance Standards	3-1
	3.1 General	3-1
	3.2 PCB-Related Performance Standards	3-1
	3.3 PCB Evaluation Procedures	3-3
	3.4 Utility Corridor Evaluations	3-5
	3.5 Summary of Appendix IX+3 Constituent Evaluation Procedures	3-5
	3.5.1 Applicable Performance Standards	3-6
	3.5.2 Overview of Evaluation Process	3-7
	3.5.3 Screening Evaluation Procedures	3-8
	3.5.4 Dioxin/Furan Evaluation Procedures	3-8
	3.5.5 Comparisons to MCP Method 1 (Wave 2) Soil Standards	3-9
	3.5.6 Evaluation of Anticipated Post-Remediation Conditions	3-10
Section	4. PCB and Non-PCB Soil Evaluations for Group 4A Floodplain Properties	4-1
	4.1 General	4-1
	4.2 Evaluations for Parcel I7-1-2	4-2
	4.3 Evaluations for Parcel I7-1-5	4-2
	4.4 Evaluations for Parcel I7-1-101	4-3
	4.4.1 PCB Evaluation – Existing Conditions for Parcel I7-1-101 (West)	4-3
	4.4.2 Appendix IX+3 Evaluation – Existing Conditions for Parcel I7-1-101 (West)	4-4
	4.4.2.1 Screening Evaluation for Parcel I7-1-101 (West)	4-4
	4.4.2.2 Evaluation of Retained Constituents for Parcel I7-1-101 (West)	4-4
	4.4.3 Proposed Remediation for Parcel I7-1-101 (West)	4-5
	4.4.4 PCB Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (West)	4-5
	4.4.5 Appendix IX+# Evaluation – Post Remediation Conditions for Parcel I7-1-101 (West)	4-6
	4.4.6 PCB Evaluation – Existing Conditions for Parcel I7-1-101 (East)	4-6
	4.4.7 Appendix IX+3 Evaluation – Existing Conditions for Parcel I7-1-101 (East)	4-7
	4.4.7.1 Screening Evaluation for Parcel I7-1-101 (East)	4-7
	4.4.7.2 Evaluation of Retained Constituents for Parcel I7-1-101 (East)	4-8
	4.4.8 Proposed Remediation for Parcel I7-1-101 (East)	4-8
	4.4.9 PCB Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (East)	4-8
	4.4.10 Appendix IX+3 Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (East)	4-9

4.5	Utility Corridor Evaluations	4-9
4.6	Overall Summary	4-10
Section 5.	PCB and Non-PCB Soil Evaluations for Group 4B Floodplain Properties	5-1
5.1	General	5-1
5.2	Evaluations for Parcel I6-1-66	5-1
5.2.1	Evaluations for Parcel I6-1-66 (East)	5-1
5.2.2	PCB Evaluation – Existing Conditions for Parcel I6-1-66 (West)	5-1
5.2.3	Appendix IX+3 Evaluation – Existing Conditions for Parcel I6-1-66 (West)	5-2
5.2.3.1	Screening Evaluation	5-2
5.2.3.2	Evaluation of Retained Constituents	5-3
5.2.4	Proposed Remediation for Parcel I6-1-66 (West)	5-3
5.2.5	PCB Evaluation – Post-Remediation Conditions for Parcel I6-1-66 (West)	5-4
5.3	Evaluations for Parcel I6-1-67	5-4
5.3.1	Evaluations for Parcel I6-1-67 (East)	5-4
5.3.2	PCB Evaluation – Existing Conditions for Parcel I6-1-67 (West)	5-4
5.3.3	Appendix IX+3 Evaluation – Existing Conditions for Parcel I6-1-67 (West)	5-5
5.3.3.1	Screening Evaluation	5-5
5.3.3.2	Evaluation of Retained Constituents	5-6
5.3.4	Proposed Remediation for Parcel I6-1-67 (West)	5-6
5.3.5	PCB Evaluation – Post-Remediation Conditions for Parcel I6-1-67 (West)	5-6
5.4	Overall Summary	5-7
Section 6.	PCB and Non-PCB Soil Evaluations for Group 4C Floodplain Properties	6-1
6.1	General	6-1
6.2	Evaluations for Parcel I6-1-62	6-1
6.2.1	PCB Evaluation – Existing Conditions	6-1
6.2.2	Appendix IX+3 Evaluation – Existing Conditions	6-2
6.2.2.1	Screening Evaluation	6-2
6.2.2.2	Evaluation of Retained Constituents	6-3
6.2.3	Proposed Remediation	6-3
6.2.4	PCB Evaluation – Post-Remediation Conditions	6-3
6.3	Evaluations for Parcel I6-1-103	6-4
6.3.1	PCB Evaluation – Existing Conditions	6-4
6.3.2	Appendix IX+3 Evaluation – Existing Conditions	6-4
6.3.2.1	Screening Evaluation	6-4
6.3.2.2	Evaluation of Retained Constituents	6-5
6.3.3	Proposed Remediation	6-5
6.3.4	PCB Evaluation – Post-Remediation Conditions	6-6
6.4	Evaluations for Parcel I6-1-102 (West)	6-6
6.4.1	PCB Evaluation – Existing Conditions	6-6
6.4.2	Appendix IX+3 Evaluation – Existing Conditions	6-7
6.4.3	Proposed Remediation	6-7
6.4.4	PCB Evaluation – Post-Remediation Conditions	6-7
6.5	Evaluations for Parcel I6-1-104	6-8
6.5.1	PCB Evaluation – Existing Conditions	6-8
6.5.2	Appendix IX+3 Evaluation – Existing Conditions	6-9
6.5.2.1	Screening Evaluation	6-9
6.5.2.2	Evaluation of Retained Constituents	6-9
6.5.3	Proposed Remediation	6-10
6.5.4	PCB Evaluation – Post-Remediation Conditions	6-10
6.6	Evaluations for Parcel I6-1-106	6-10

6.6.1	PCB Evaluation – Existing Conditions.....	6-10
6.6.2	Appendix IX+3 Evaluation – Existing Conditions	6-11
6.6.2.1	Screening Evaluation	6-11
6.6.2.2	Evaluation of Retained Constituents.....	6-12
6.6.3	Proposed Remediation	6-12
6.6.4	PCB Evaluation – Post-Remediation Conditions.....	6-12
6.7	Evaluations for Parcel I6-1-105 (West).....	6-12
6.7.1	PCB Evaluation – Existing Conditions.....	6-12
6.7.2	Appendix IX+3 Evaluation – Existing Conditions	6-12
6.7.2.1	Screening Evaluation	6-12
6.7.2.2	Evaluation of Retained Constituents.....	6-12
6.7.3	Proposed Remediation	6-12
6.7.4	PCB Evaluation – Post-Remediation Conditions.....	6-12
6.8	Utility Corridor Evaluations	6-12
6.9	Overall Summary	6-12
Section 7	Design Information.....	7-12
7.1	General	7-12
7.2	Technical Specifications	7-12
7.3	Soil Removal Activities	7-12
7.4	Backfilling Excavations	7-12
7.5	Flood Storage Capacity	7-12
7.6	Applicable or Relevant and Appropriate Requirements	7-12
Section 8	Contractor Selection	8-12
Section 9	Implementation Plan	9-12
9.1	General	9-12
9.2	Project Participants.....	9-12
9.3	Contractor Submittals	9-12
9.4	Site Preparation	9-12
9.4.1	Utility Clearances.....	9-12
9.4.2	Work Area Security.....	9-12
9.4.3	“Clean” Access Area.....	9-12
9.4.4	Survey Control	9-12
9.4.5	Erosion and Sedimentation Control Measures.....	9-12
9.4.6	Surface Preparation.....	9-12
9.5	Construction Activities	9-12
9.5.1	Soil Removal and Material Handling	9-12
9.5.2	Transport and Disposition of Excavated Materials and Remediation-Derived Waste	9-12
9.5.3	Backfilling of Excavations	9-12
9.5.4	Equipment Cleaning	9-12
9.5.5	Restoration of Disturbed Vegetation and Natural Pool	9-12
9.6	Perimeter Air Monitoring	9-12
Section 10	Post-Construction Activities	10-12
10.1	General	10-12
10.2	Project Closeout – Pre-Certification Inspection and Completion Report.....	10-12
10.3	Post-Removal Site Control Activities	10-12

10.3.1	Periodic Inspections	10-12
10.3.2	Maintenance/Repair	10-12
10.3.3	Inspection Reporting.....	10-12
10.4	Additional Inspection Activities	10-12

Section	11. Schedule	11-12
----------------	---------------------------	--------------

Figures

1-1	Removal Action Area
1-2	Site Plan
1-3	PCB Soil Sample Locations and Corresponding Analytical Results – Group 4A
1-4	PCB Soil Sample Locations and Corresponding Analytical Results – Group 4B
1-5	PCB Soil Sample Locations and Corresponding Analytical Results – Group 4C
2-1	Appendix IX+3 Soil Sample Locations – Group 4A
2-2	Appendix IX+3 Soil Sample Locations – Group 4B
2-3	Appendix IX+3 Soil Sample Locations – Group 4C
9-1	Proposed Primary and Secondary Travel Routes for Excavated Materials to OPCAs

Appendices

A	Technical Drawings
---	--------------------

Volume II of III

B	PCB Spatial Averaging Evaluation Tables and Polygon Maps
---	--

Volume III of III

C	Non-PCB Appendix IX+3 Evaluation Tables
D	Risk Evaluation of Non-PCB Appendix IX+3 Constituents in Soils at Parcel I7-1-101 (Group 4A)
E	Technical Specifications
F	Contractor Submittal Tracking Form
G	Ambient Air Monitoring Program

1. Introduction

1.1 General

On October 27, 2000, a Consent Decree (CD) executed in 1999 by the General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and several other government agencies was entered by the United States District Court for the District of Massachusetts. The CD requires (among other things) the performance of Removal Actions to address polychlorinated biphenyls (PCBs) and other hazardous constituents present in soil, sediment, and groundwater at several Removal Action Areas (RAAs) located in or near Pittsfield, Massachusetts, which are part of the GE-Pittsfield/Housatonic River Site (the Site). For each Removal Action, the CD and accompanying *Statement of Work for Removal Actions Outside the River* (SOW) (Appendix E to the CD) establish Performance Standards that must be achieved, as well as specific work plans and other documents that must be prepared to support the response actions for each RAA.

Two of these RAAs encompass properties located in whole or in part within the floodplain of the Housatonic River adjacent to the 1½ Mile Reach of the River: 1) Floodplain Current Residential Properties Adjacent to the 1½ Mile Reach – Actual/Potential Lawns; and 2) Floodplain Non-Residential Properties Adjacent to the 1½ Mile Reach (Excluding Banks). These RAAs are jointly referred to as the 1½ Mile Floodplain RAAs, and have been divided into four phases for investigation, evaluation, and remediation purposes to facilitate coordination with the remediation actions being conducted separately by EPA for sediments and riverbank soils in this same reach of the river. These phases are:

Phase 1 - Lyman Street Bridge to Elm Street Bridge;

Phase 2 - Elm Street Bridge to Dawes Avenue;

Phase 3 - Dawes Avenue to Pomeroy Avenue; and

Phase 4 - Pomeroy Avenue to the Confluence.

This *Removal Design/Removal Action Work Plan for the Phase 4 Floodplain Properties* (RD/RA Work Plan) addresses the three groups of properties in Phase 4 of the 1½ Mile Floodplain RAAs – Groups 4A, 4B, and 4C, which are shown on Figures 1-1 (general location) and 1-2 (more specific site plan). As further described below, the Phase 4 floodplain properties consist of the non-bank portions of five residential parcels and six recreational parcels. The portions of the residential properties covered by this RD/RA Work Plan consist of

Actual/Potential Lawns (as defined in the CD). The sediments within the Housatonic River in this area and the adjacent riverbank soils are being addressed by EPA as part of the 1½ Mile Reach Removal Action.

The Phase 4 floodplain properties have been sampled by both GE and EPA for PCBs and other constituents listed in Appendix IX of 40 CFR Part 264, plus three additional constituents – benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3). Based on the data from those investigations, this RD/RA Work Plan presents the results of GE’s evaluation of the need for and scope of soil remediation to achieve the applicable Performance Standards under the CD and SOW for PCBs and other Appendix IX+3 constituents in soil. In addition, this RD/RA Work Plan presents GE’s proposed remediation, as well as an evaluation of PCBs and other Appendix IX+3 constituents in soil under anticipated post-remediation conditions to demonstrate that the proposed remediation will achieve the applicable Performance Standards under the CD and SOW. This RD/RA Work Plan also provides technical design information regarding the remediation, an implementation plan, details regarding post-construction activities, and an implementation schedule.

1.2 Description of Phase 4 Floodplain Properties

The Phase 4 floodplain properties are shown on Figure 1-2. Group 4A consists of three properties on the west side of the Housatonic River – a recreational park owned by the City of Pittsfield (Parcel I7-1-101, Fred Garner Park), a small vacant property (considered recreational) owned by an electric utility company (Parcel I7-1-5), and a residential property (Parcel I7-1-2). The Group 4A floodplain properties are primarily bounded to the north by Pomeroy Avenue, to the south by the riverbanks of the East and West Branches of the Housatonic River, to the east by the riverbank of the East Branch of the Housatonic River, and to the west by the riverbank of the West Branch of the Housatonic River and other adjacent parcels. Group 4B consists of two contiguous residential properties on the east side of the river (Parcels I6-1-66 and I6-1-67). The Group 4B floodplain properties are primarily bounded to the north by another parcel, to the south by the Group 4C floodplain properties, to the east by Brunswick Street, and to the west by the riverbank of the East Branch of the Housatonic River. Group 4C consists of four vacant properties (considered to be in recreational use) on the east side of the river – three owned by GE (Parcels I6-1-103, I6-1-104, and I6-1-106) and one owned by the Commonwealth of Massachusetts (Parcel I6-1-62) – plus portions of two residential properties (I6-1-102 and I6-1-105) which were not originally included in the SOW but have since been added by GE as stated in a document titled *Pre-Design Investigation Report for Phase 4 Floodplain Properties* (PDI Report). The Group 4C floodplain properties are primarily bounded to the north by the Group 4B floodplain properties, to the south by

properties downstream of the confluence, to the east by other adjacent properties, and to the west by the riverbank of the East Branch of the Housatonic River.

Each of the above-listed properties represents a single evaluation area except for Parcels I7-1-101, I6-1-66, and I6-1-67. As indicated in the PDI Report, GE agreed to consider two separate evaluation areas for each of the latter three parcels (i.e., separate “East” and “West” evaluation areas). In addition, based on the results of completed soil investigations, evaluation areas are limited to the western portions of Parcels I6-1-102 and I6-1-105. Finally, for the properties located adjacent to the Housatonic River (all of the properties except Parcels I6-1-102, I6-1-105, and I7-1-2), only the non-riverbank portions of the properties are included in the Phase 4 floodplain properties. As mentioned above, riverbank portions of these properties will be addressed by EPA through the 1½ Mile Reach Removal Action.

1.3 Scope and Format of RD/RA Work Plan

The remainder of this RD/RA Work Plan is presented in ten sections. The title and a brief overview of each section are presented below:

Section 2 – Summary of Pre-Design Activities and Available Soil Data, provides a brief summary of the pre-design investigations and other activities conducted by GE at the Phase 4 floodplain properties, and presents the data used to evaluate the need for remediation to address PCBs and, where applicable, other Appendix IX+3 constituents in soil.

Section 3 – Summary of PCB and Appendix IX+3 Evaluation Procedures, provides an overview of the applicable PCB and Appendix IX+3 Performance Standards for the Phase 4 floodplain properties, and describes the procedures used to evaluate PCBs and other Appendix IX+3 constituents (as applicable) in existing soil and, where necessary, post-remediation conditions.

Section 4 – PCB and Non-PCB Soil Evaluations for Group 4A Floodplain Properties, presents the results of the evaluations of PCBs and other Appendix IX+3 constituents (as applicable) for each evaluation area located within the Group 4A floodplain properties. This section first evaluates the soil data for PCBs and other Appendix IX+3 constituents under existing conditions at the Group 4A evaluation areas to determine the need for remedial actions to achieve the applicable Performance Standards. Where remediation is necessary, the proposed remedial actions to achieve the Performance Standards (i.e., soil removal/replacement) are then

described and depicted on the attached Technical Drawings (Appendix A). Further, for evaluation areas where remediation is necessary to address PCBs and/or other constituents in soil, this section presents revised evaluations of anticipated post-remediation conditions for such constituents to demonstrate that the proposed remedial actions will achieve the applicable Performance Standards.

Section 5 – PCB and Non-PCB Soil Evaluations for Group 4B Floodplain Properties, presents the results of the evaluations of PCBs and other Appendix IX+3 constituents (as applicable) for each evaluation area located within the Group 4B floodplain properties. The information presented in this section for the Group 4B properties is similar to that provided in Section 4, but relates to the Group 4B floodplain properties.

Section 6 – PCB and Non-PCB Soil Evaluations for Group 4C Floodplain Properties, presents the results of the evaluations of PCBs and other Appendix IX+3 constituents (as applicable) for each evaluation area located within the Group 4C floodplain properties. The information presented in this section for the Group 4C properties is similar to that provided in Sections 4 and 5, but relates to the Group 4C floodplain properties.

Section 7 – Design Information, describes additional design-related information associated with the remedial actions identified in Sections 4, 5, and 6. Such information includes technical plans, specifications, and drawings; information regarding performance of soil removal activities; an evaluation of potential impacts to the flood storage capacity in this area and the need for compensatory flood storage; identification of site-specific Applicable or Relevant and Appropriate Requirements (ARARs); and a description of the procedures to be implemented to ensure attainment of those ARARs.

Section 8 – Contractor Selection, discusses the process for selecting the Remedial Action Contractor.

Section 9 – Implementation Plan, discusses certain site-specific implementation components, including identification of the project participants, Contractor submittal requirements, project-specific site preparation and construction-related components, and the perimeter air monitoring activities proposed during the performance of the remedial actions.

Section 10 – Post-Construction Activities, identifies the various activities to be performed following implementation of the remedial actions, including project closeout activities (i.e., pre-certification inspection and preparation of a Final Completion Report) and Post-Removal Site Control activities.

Section 11 – Schedule, identifies the anticipated schedule for performance of the proposed remedial actions and the subsequent reporting activities.

The discussions in the sections listed above are supported by various figures and appendices included in this RD/RA Work Plan.

2. Summary of Pre-Design Activities and Available Soil Data

2.1 General

Prior to submittal of an RD/RA Work Plan for a given RAA, the CD and SOW require the characterization of soils within the RAA and collection of other relevant site information. These activities, collectively referred to as pre-design activities, serve as the basis for the subsequent technical RD/RA submittals. This section provides a summary of the pre-design activities that have been performed by GE at the Phase 4 floodplain properties. These activities primarily involved the performance of soil sampling and analyses in accordance with the investigation requirements specified in the CD and SOW and were previously summarized in documents provided to EPA. In addition, to support the remedial evaluations presented herein, GE has performed a detailed site survey to identify surface elevations and topography, property boundaries and easements, certain utilities (e.g., manholes, catch basins), soil sample locations, and other site features.

2.2 Summary of Pre-Design Soil Investigations

The scope of pre-design investigations was initially proposed in a document titled *Pre-Design Investigation Work Plan for Floodplain Properties Adjacent to the 1½ Mile Reach of the Housatonic River*, dated January 2002. In a letter dated July 8, 2002, EPA provided conditional approval of the pre-design soil investigations proposed in that work plan for the Phase 1 properties, and directed GE to address the remaining 1½ Mile floodplain properties through the future submission of Phase- and/or Group-Specific Work Plan Addenda for those properties.

Group 4A Properties: The pre-design PCB investigations for the Group 4A floodplain properties were proposed in a document titled *Work Plan Addendum – Phase 4 Floodplain Properties, Group 4A* (Group 4A Work Plan Addendum), dated July 14, 2004. This submittal was conditionally approved by EPA in a letter dated December 3, 2004. The scope of initial pre-design non-PCB investigations was presented in a document titled *Proposal for Non-PCB Pre-Design Investigations – Phase 4 Floodplain Properties, Group 4A – Parcel I7-1-101* (Non-PCB Investigation Proposal for Parcel I7-1-101), dated December 15, 2004. This submittal was conditionally approved by EPA in a letter dated January 13, 2005. The pre-design investigations proposed in these documents were subsequently performed, and the results were presented in the PDI Report, dated April 12, 2005, which was conditionally approved by EPA in a letter dated June 14, 2005. In addition to summarizing the analytical

results obtained during the pre-design investigations, the PDI Report also presented the scope of supplemental non-PCB investigations to be conducted at Parcel I7-1-101 of the Group 4A properties. Supplemental investigations were conducted in June 2005 and the results of these investigations were presented in the *Supplemental Pre-Design Investigation Report – Phase 4 Floodplain Properties, Group 4A* (Supplemental PDI Report), dated July 13, 2005. This submittal was conditionally approved by EPA in a letter dated August 3, 2005.

Group 4B and 4C Properties: The pre-design investigations for the Group 4B and 4C floodplain properties were proposed in a document titled *Work Plan Addendum – Phase 4 Floodplain Properties, Groups 4B and 4C* (Groups 4B and 4C Work Plan Addendum), dated December 15, 2004. This submittal was conditionally approved by EPA in a letter dated January 13, 2005. The pre-design investigations proposed in these documents were subsequently performed, and the results were presented in the PDI Report.

The above-referenced pre-design investigations of the Phase 4 floodplain properties involved the collection and analysis of a total of approximately 325 soil samples (excluding duplicates) for analysis of PCBs and approximately 70 soil samples (excluding duplicates) for other Appendix IX +3 constituents. These sampling and analysis activities were conducted in accordance with GE's *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP). In addition, analytical results obtained during pre-design investigations were subject to data quality review validation in accordance with Section 7.5 of the FSP/QAPP.

2.3 Soil Investigation Summary

The locations of all soil samples within or adjacent to the Phase 4 floodplain properties and used in this RD/RA Work Plan, including the usable historical and EPA soil samples, are shown on Figures 1-3, 1-4, and 1-5 (for PCBs) and Figures 2-1, 2-2, and 2-3 (for non-PCB Appendix IX+3 constituents). The PCB analytical results for all samples used in the evaluations presented in this RD/RA Work Plan are provided in Appendix B and shown on Figures 1-3, 1-4, and 1-5. The non-PCB Appendix IX+3 analytical results for all samples used in the evaluations presented in this RD/RA Work Plan are provided in Appendix C.

3. Summary of PCB and Appendix IX+3 Performance Standards

3.1 General

This section describes the applicable Performance Standards specified in the CD and SOW for PCBs and other Appendix IX+3 constituents in soil at the Phase 4 floodplain properties and the procedures used by GE to determine the need for and scope of remediation actions to achieve those Performance Standards.

3.2 PCB-Related Performance Standards

For the Phase 4 floodplain properties, the Performance Standards related to the presence of PCBs in soil are set forth in Paragraph 26 of the CD and Section 2.5.2 of the SOW. The pertinent Performance Standards related to the presence of PCBs in soil at the Phase 4 floodplain properties may be summarized as follows:

- For residential properties, GE must calculate spatial average PCB concentrations for the 0- to 1-foot and 1- to X-foot depth increments at each Actual/Potential Lawn area, where X equals the depth at which all or the majority of detected PCB concentrations were observed (up to a maximum of 15 feet). If the spatial average PCB concentration in the 0- to 1-foot or 1- to X-foot depth increment exceeds 2 ppm, GE must remove and replace soils as necessary to achieve a spatial average PCB concentration at or below 2 ppm in each of those depth increments. In addition, for any residential parcel that exceeds 0.25 acre in size, GE must remove all soils containing PCB concentrations greater than a not-to-exceed (NTE) level of 10 ppm from the top foot in unpaved portions of such parcel.
- For non-residential properties, the applicable Performance Standards depend on whether a Grant of Environmental Restriction and Easement (ERE) will be executed and recorded for the property. GE and the City of Pittsfield have agreed in the CD to execute EREs at properties which they own and which do not meet residential standards. In addition, the State has agreed in the CD (§ 62.b) that, for State-owned properties, the State will not unreasonably withhold consent to placement of an ERE so long as the ERE would not interfere with the pre-CD use of the property. Thus, it is assumed in this RD/RA Work Plan that the non-residential properties owned by GE (Parcels I6-1-103, I6-1-104, and I6-1-106), the City of

Pittsfield (Parcel I7-1-101), and the State (Parcel I6-1-62) will be subject to EREs if residential standards are not met.

- For the evaluation areas within these non-residential parcels where EREs will be executed (which are considered to be in recreational use), GE must remove/replace soils as necessary to achieve spatial average PCB concentrations of 10 ppm in the top foot and 15 ppm in the 1- to 3-foot depth increment. In addition, at each of these areas that exceeds 0.5 acre in size, GE must ensure the removal of all soils in the top foot in unpaved portions that contain PCB concentrations greater than 50 ppm – the NTE level for recreational properties. (Alternatively, GE may establish averaging areas that do not exceed 0.5 acre in size or may propose other specific averaging areas to EPA for approval, in which case the above NTE level will not apply.) Further, if the remaining spatial average PCB concentration exceeds 100 ppm in the 0- to 15-foot depth increment or to whatever depth sampling data exist (if less than 15 feet), GE must install an engineered barrier. For each evaluation area at these recreational floodplain properties, since the existing sampling data are present at various depth, GE proposed in the PDI Report to select a single depth (which includes all or a majority of detected PCB concentrations in soil) as an “X” value to represent the overall depth for evaluation purposes. EPA approved that proposal.
- For the remaining non-residential property in Phase 1 (Parcel I7-1-5), which is owned by a utility company and is considered recreational, the owner has not to date responded to GE’s specific request as to whether the owner is willing to execute an ERE on this parcel. However, the same utility company previously informed GE that it did not wish to execute EREs on several other properties owned by this company at the Site. Hence, GE has assumed, for purposes of this RD/RA Work Plan, that the owner will take the same position – i.e., that it is not interested in executing an ERE – for Parcel I7-1-5. Based on that assumption, GE will be required under the CD to implement a Conditional Solution at this property. For a property subject to a Conditional Solution, GE must meet the same Performance Standards described above for recreational properties with EREs except that it must achieve spatial average PCB concentrations of 10 ppm in both the top foot and top 3 feet of soil (instead of 100 ppm in the top foot and 15 ppm in the 1- to 3-foot depth increment). In addition, GE must comply with the additional requirements in Paragraphs 34 through 38 of the CD for Conditional Solutions. (In the event that GE subsequently learns that the utility company is in fact willing to execute an ERE for Parcel I7-1-5, GE will submit an addendum to this RD/RA Work Plan to describe any changes necessary to address that situation.)

-
- In addition, at all non-residential areas where subgrade utilities potentially subject to emergency repair requirements are present, if the spatial average PCB concentration in the utility corridor exceeds 200 ppm, GE must evaluate whether any additional response actions are necessary. Further, if subgrade utilities are installed, repaired, or replaced, GE must ensure that the spatial average PCB concentration in the backfill material is less than 10 ppm in the top 3 feet and 25 ppm at greater depths for recreational areas.

3.3 PCB Evaluation Procedures

The procedures used to evaluate PCB concentrations in soil are established in Attachment E to the SOW (Protocols for PCB Spatial Averaging). The PCB evaluations presented in this RD/RA Work Plan incorporate the usable PCB data from historical samples, samples collected by EPA, and the pre-design soil samples collected by GE (including the data from the supplemental soil samples). The locations of the PCB samples used in the evaluations for the Group 4A, 4B, and 4C floodplain properties are shown on Figures 1-3, 1-4, and 1-5, respectively.

The initial task in the PCB evaluation process for the Phase 4 floodplain properties was to assess the PCB concentrations in soil under existing conditions. This task involved two general steps. First, for each evaluation area to which the NTE levels specified above apply (i.e., recreational areas that exceed 0.5 acre in size and residential areas that exceed 0.25 acre in size), the discrete PCB concentrations in the top foot of soil in unpaved portions of the evaluation area were compared to the applicable NTE levels – 50 ppm for recreational areas and 10 ppm for residential areas. Second, spatial average PCB concentrations were calculated for each relevant depth increment at each evaluation area using the polygon-based spatial averaging techniques described in Attachment E to the SOW without consideration of anticipated removals to address the NTE levels. These techniques involve the following steps:

- For each evaluation area and depth increment subject to PCB spatial average calculations, a detailed site plan was first developed to illustrate the following: property/evaluation area boundaries; surface topography; soil sampling locations within and adjacent to the evaluation area; locations of roadways, utilities, easements, etc.; locations of buildings, pavement, and other permanent structures; and other significant site features.
- Next, Theissen polygon maps were developed for each evaluation area and depth increment. Theissen polygon mapping involves the use of computer software to draw perpendicular bisector lines between

adjacent sample locations to create two-dimensional, sample-specific polygon areas. Certain boundary conditions impact the generation of Thiessen polygons, such as the boundaries of the area subject to averaging, presence of paved and unpaved areas, easement boundaries, building footprints, property lines, etc. As appropriate, the computer-generated Thiessen polygons were modified to reflect actual site conditions, presence/absence of soil at a given depth, locations of property lines, or other specific or unique site considerations. These polygons did not include the areas under existing buildings. Once the Thiessen polygon mapping was complete, all of the soil areas and depths potentially subject to response actions were adequately characterized for use in subsequent evaluations. After generation of the Thiessen polygons, polygon identification numbers were assigned to each polygon and the surface area of each polygon was calculated.

- Computer spreadsheets were then prepared to combine information obtained from the Thiessen polygon mapping (i.e., polygon ID and area for each polygon) with the analytical results of soil sampling to provide a three-dimensional characterization of the soils associated with each polygon. The volume of soil associated with each polygon was based on the surface area of the polygon multiplied by the corresponding depth of soil for which samples were collected. Using the information described above, a spatial average PCB concentration was derived by multiplying the volume of each polygon by the corresponding PCB concentration, summing the results of this calculation for each polygon involved in the evaluation, and then dividing that sum by the cumulative soil volume associated with all of the polygons. This procedure yields a spatial average PCB concentration that incorporates both volume- and area-weighted considerations.

The resulting spatial average PCB concentrations were then compared to the applicable PCB Performance Standards specified in Section 3.2.1 above to determine whether soil remediation is necessary to address PCBs and, if so, the type of remediation required under the CD and SOW.

For areas where there were exceedances of the applicable NTE level (if any) in the top foot of unpaved soil or where the spatial average PCB concentrations exceeded the applicable Performance Standards, a remediation proposal was developed. For this RAA, all proposed remediation activities consist of soil removal/replacement. For such areas, an evaluation was conducted to confirm that the proposed soil removal/replacement would achieve the applicable PCB Performance Standards. In accordance with the procedures for the anticipated post-remediation evaluations in Attachment E to the SOW, this evaluation consisted of the following steps: First, the spatial averaging procedures described above were used to assess the PCB concentrations at each evaluation area in its post-remediation condition by: 1) assuming the removal of soils within subject polygons to the

required depth; 2) assuming that the excavated soils are replaced with backfill material that contains PCBs at an assumed concentration of 0.021 ppm (i.e., the average concentration of PCBs in sampled backfill sources, as indicated in Table 2 of GE's *Proposed Backfill Data Set for CD Sites*, March 11, 2003); and 3) calculating the anticipated post-remediation spatial average PCB concentration(s). The anticipated post-remediation spatial average PCB concentrations were then compared to the applicable Performance Standards to ensure that the proposed remediation will achieve that Performance Standards. The PCB evaluation results are summarized on an area-by-area basis in Sections 4, 5, and 6, with supporting documentation (i.e., evaluation tables and polygon figures) provided in Appendix B.

3.4 Utility Corridor Evaluations

GE has identified the locations of the existing utility lines within the Phase 4 floodplain properties as part of the completed survey activities performed during pre-design activities. The locations of the utility lines are shown on Figures 1-3, 1-4, and 1-5. Under the CD and SOW, at non-residential properties where utilities potentially subject to emergency repair requirements are present and the spatial average PCB concentration for the soils in the utility corridor exceeds 200 ppm, GE is required to evaluate the need for additional response actions. As further described below, at the non-residential properties in Phase 4, GE has evaluated the PCB analytical results from samples located within an approximately 50-foot wide band centered on each of the utilities (i.e., located within approximately 25 feet from the centerline of the utility). As discussed further in Sections 4.5 and 6.8, exceedances of 200 ppm in PCB samples collected within the utility corridors at non-residential Phase 4 floodplain properties were observed at four boring locations. To further investigate how these results would impact the PCB spatial average within the utility corridors, the average PCB concentration was calculated for each of these four borings on a boring-by-boring basis. The average PCB concentration within each of the four individual borings was observed to be less than 200 ppm. As a result, spatial averaging within the utility corridors is not necessary for the non-residential Phase 4 floodplain properties.

3.5 Summary of Appendix IX+3 Constituent Evaluation Procedures

This section describes the procedures used to evaluate non-PCB Appendix IX+3 constituents in soil. In accordance with the SOW (pp. 69-70 and Attachment F at p. 2) and the PDI Report, sampling for such non-PCB constituents was not conducted and evaluations of those constituents was not performed for evaluation areas where review of the data indicated that remediation will not be necessary to address PCBs. In addition, as proposed in the EPA-approved PDI Report, non-PCB investigations were not conducted within Parcel I6-1-102

since the limited removal within that evaluation area is due to NTE levels observed on the adjacent Parcel I6-1-103. For each of the remaining evaluation areas, the non-PCB Appendix IX+3 constituents were evaluated first for the area in its existing condition. Then, for each such area where the applicable Performance Standards are not met, a remediation proposal was developed, and post-remediation conditions were evaluated to ensure achievement of the Performance Standards. This section includes an overview of the applicable Performance Standards, an overview of the evaluation process used to assess achievement of those standards, and detailed descriptions of the specific evaluation procedures used. The evaluation results are summarized on an area-by-area basis in Sections 4, 5, and 6, with supporting documentation provided in Appendix C (evaluation tables) and Appendix D (risk evaluations).

3.5.1 Applicable Performance Standards

The applicable Performance Standards for non-PCB Appendix IX+3 constituents in soil at the Phase 4 floodplain properties are as follows:

- For dioxins and furans, total toxicity equivalency quotient (TEQ) concentrations must be calculated using the Toxicity Equivalency Factors (TEFs) developed by the World Health Organization (WHO) (van den Berg J. et al., *Environ. Health Perspectives*, Vol. 106, No. 12, Dec. 1998). Either the maximum TEQ concentration or the 95% percent upper confidence limit on the mean (95% UCL) of the TEQ data must be below certain PRGs developed or approved by EPA for dioxin/furan TEQs. These PRGs are: for recreational areas, 1 ppb in the top foot and 1.5 ppb in the 1- to 3-foot depth interval, and for residential areas, 1 ppb. In addition, EPA has previously requested in a May 24, 2002 comment letter on GE's *Conceptual RD/RA Work Plan for the Newell Street Area I* (Newell Street Area I Work Plan) that GE also compare the maximum or 95% UCL TEQ concentrations to the following TEQ criteria, although these are not Performance Standards specified in the CD or SOW: 1 ppb for the 0- to 3-foot depth increment at recreational areas that will not have EREs; and 20 ppb for soils below 3 feet at all recreational areas.
- For other non-PCB constituents, any combination of the following must be achieved: 1) maximum concentrations of individual constituents that do not exceed the Screening PRGs established or approved by EPA (as discussed below); or 2) for the remaining constituents, average concentrations that either: (a) do not exceed the MCP Method 1 soil standards (or Method 2 standards, if developed); or (b) are shown through an area-specific risk evaluation to have cumulative risk levels that do not exceed (after rounding) an excess lifetime cancer risk of 1×10^{-5} and a non-cancer Hazard Index of 1.

3.5.2 Overview of Evaluation Process

The initial task performed in the evaluation of non-PCB constituents in soil at the Phase 4 floodplain properties was to assess such constituents in soil at each evaluation area under existing conditions, based on available Appendix IX+3 data collected from that area. This assessment consisted of several steps:

- First, a screening step was conducted which generally involved comparison of the maximum concentrations of all detected constituents (other than dioxin/furan TEQs) to the applicable PRGs developed by EPA Region 9 (as set forth in Exhibit F-1 to Attachment F of the SOW) or certain surrogate PRGs previously approved by EPA for those constituents that do not have EPA Region 9 PRGs. This screening step is discussed further in Section 3.5.3.
- Second, for dioxin/furan TEQs, the maximum concentration at each evaluation area and relevant depth increment was compared to the dioxin/furan PRG described above. This step is discussed further in Section 3.5.4.
- Third, for those constituents (other than dioxin/furan TEQs) that were not screened out in Step 1, the existing average concentrations of each such constituent were calculated for the same depth increments used for the required PCB evaluations. These average concentrations were then compared to the MCP Method 1 soil standards for such constituents. For purposes of this comparison, based on agreement between GE and EPA, GE used the “Wave 2” Method 1 soil standards proposed by MDEP in September 2004, in lieu of the current Method 1 soil standards, because those Wave 2 Method 1 soil standards are expected to be finalized shortly, prior to implementation of the remediation actions at these floodplain properties. This step is discussed further in Section 3.5.5.
- Fourth, at evaluation areas where the above evaluations indicated the need for remediation to address non-PCB constituents in soil, a remediation proposal was developed, consisting of removal/replacement of the soil containing the samples that had concentrations causing the exceedance(s) of the applicable standards. For such areas, an evaluation was then conducted of post-remediation conditions. This post-remediation evaluation consisted first of repeating Step 2 or 3 (as applicable) to assess whether the proposed remediation would achieve the applicable standards described in those steps. In addition, in some cases where there were still exceedances of the Method 1 soil standards, an area-specific risk evaluation was performed for the same constituents that were compared to the Method 1 standards and in accordance with the procedures for

such evaluations in the SOW, so as to demonstrate that the proposed remediation will achieve the applicable Performance Standards for non-PCB constituents. The specific procedures used in these post-remediation evaluations are described further in Section 3.5.6.

3.5.3 Screening Evaluation Procedures

As noted above, the first step in the evaluation of non-PCB Appendix IX+3 constituents in soil under existing conditions at the evaluation areas within the Phase 4 floodplain properties was the performance of a screening evaluation. In this step, the maximum concentrations of all detected constituents (other than dioxins/furans) were compared to the EPA Region 9 PRGs set forth in Exhibit F-1 to Attachment F of the SOW, using residential PRGs for each of the evaluation areas. However, for certain constituents, EPA Region 9 PRGs are not available. For some of these constituents, the SOW identifies surrogate PRGs that may be used for screening purposes. Specifically, in accordance with the SOW, for polycyclic aromatic hydrocarbons (PAHs) for which EPA Region 9 PRGs do not exist, the EPA Region 9 PRG for benzo(a)pyrene was used for carcinogenic PAHs and the EPA Region 9 PRG for naphthalene was used for non-carcinogenic PAHs. In addition, for certain other constituents that do not have EPA Region 9 PRGs, this screening step used the PRGs for several surrogate compounds which have previously been approved by EPA for use at other RAAs. The Region 9 PRGs and surrogate PRGs used in this step are jointly referred to herein as the “Screening PRGs.”

3.5.4 Dioxin/Furan Evaluation Procedures

For each dioxin/furan sample, a total TEQ concentration was calculated using the WHO TEFs. In making these calculations, the concentrations of the individual dioxin/furan compounds that were not detected in a given sample were represented as one-half the analytical detection limit for such compounds. Then, for each averaging area and relevant depth increment, the maximum TEQ concentration was compared to the applicable PRG identified in the SOW for that type of area and depth, as specified in Section 3.5.1 above. In addition, at EPA’s request, the maximum TEQ concentrations within the additional depth increments specified in EPA’s May 24, 2002 comment letter on the Newell Street Area I Work Plan were compared to the TEQ criteria specified in that letter (as also stated in Section 3.5.1), although these comparison criteria are not Performance Standards under the CD or SOW. If the maximum TEQ concentrations at each averaging area were less than the applicable PRGs (or other comparison criteria requested by EPA), it was concluded that no further response actions are necessary to address dioxin/furan TEQs. (Since in all cases the maximum TEQ concentrations were

below the applicable PRGs, there was no need at the Phase 4 floodplain properties to calculate 95% UCL TEQ concentrations.)

3.5.5 Comparisons to MCP Method 1 (Wave 2) Soil Standards

For each constituent (other than dioxins/furans) that was not eliminated in the screening step, an average concentration was calculated for the evaluation area and depth increment in question and compared to the applicable MCP Method 1 (Wave 2) soil standards. In calculating these average concentrations, non-detect sample results were represented as one-half the analytical detection limit.

To determine which set of Method 1 (Wave 2) soil standards to use in these comparisons, an assessment was made based on the relevant MCP criteria. In general, these criteria require consideration of the property type, accessibility of the soils (relative to their depth and presence of pavement and buildings), potential uses of the area(s) by adults and children, and the relative frequency and intensity of such use (see 310 CMR 40.0933). The Phase 4 floodplain properties include recreational and residential areas. A summary of the Method 1 (Wave 2) soil standards selected for each type of area is presented below.

For recreational areas, it was conservatively assumed that both child and adult use could occur, and that the potential frequency and intensity of such use could be “high” for soils in the top 3 feet. As a result, the Method 1 (Wave 2) S-1 soil standards were selected to apply to soils located within the upper 3 feet of each such area – i.e., the 0- to 1-foot and 1- to 3-foot or 0- to 3-foot depth increments (as applicable). For other depth increments (which typically include exposure to deeper soil), it was assumed that children would not have both a high frequency and high intensity of use; hence, the Method 1 (Wave 2) S-2 standards were determined to apply to the 0- to X-foot depth increment.

For residential areas, the SOW provides for the use of Category S-1 standards. Therefore for the 0- to 1-foot and for the 1- to X-foot depth increments, the average concentrations in each depth increment were compared to the Category S-1 soil standards within the Wave 2 Method 1 standards.

It should also be noted that the numerical values of the MCP Method 1 (Wave 2) soil standards vary depending on the applicable MCP groundwater classification. For the Phase 4 floodplain properties, two MCP groundwater classifications apply depending on the specific location within the RAA: GW-2 groundwater is groundwater located within 15 feet of the ground surface and within 30 feet of occupied structures, while GW-3

groundwater applies to all areas within the RAA. For all the constituents that were subject to this phase of Appendix IX+3 evaluations at the Phase 4 floodplain properties, the MCP Method 1 (Wave 2) soil standards for a given soil category are the same regardless of whether the groundwater is classified as GW-2 or GW-3.

3.5.6 Evaluation of Anticipated Post-Remediation Conditions

For the evaluation areas where the foregoing evaluations indicated the need for remediation to address non-PCB constituents, such remediation has been proposed and evaluations were then conducted for the constituents under post-remediation conditions to demonstrate that the proposed remediation will achieve the Performance Standards for the non-PCB constituents. The specific remediation actions proposed to address such constituents consist of soil removal/replacement. Soil removal actions were taken into account in the post-remediation evaluation in a similar way to the way in which they were considered for PCBs. Specifically, sample results from soil that is proposed for removal to address non-PCB constituents were eliminated from consideration, and it was assumed that such soil will be replaced with an equal volume of clean soil containing the concentrations of organic and inorganic constituents listed in Table 2 of GE's *Proposed Backfill Data Set for CD Sites* (March 11, 2003). However, where removal is proposed to address non-PCB constituents in a given depth increment, the post-remediation evaluations for depth intervals that do not include that increment were based on existing conditions to be conservative. For example, if soil removal is proposed to address a sample collected from the 1- to 3-foot depth increment, the post-remediation evaluation for the 0- to 1-foot depth increment at that area did not incorporate that soil removal, even though the removal will in fact remove some of the soil from the top foot. Rather, the post-remediation evaluation for the 0- to 1-foot depth increment was based on existing conditions and only the post-remediation evaluations for the depth intervals that include the 1- to 3-foot depth increment took account of the soil removal.

Once the post-remediation concentrations were calculated, the evaluations described in Sections 3.5.4 and 3.5.5 were repeated (as necessary) for such post-remediation conditions. For the floodplain Phase 4 properties, this step consisted of comparing the post-remediation average concentrations of the constituents that were retained after the screening step (excluding dioxin/furan TEQs, which did not exceed the applicable PRGs under existing conditions) to the MCP Method 1 (Wave 2) soil standards.

For two recreational evaluation areas (I7-1-101 East and I7-1-101 West), this comparison showed slight exceedances of the Method 1 (Wave 2) soil standards for one or more non-PCB constituents (other than dioxins/furans) in one or more of the relevant depth increments. Accordingly, area-specific risk evaluations

were performed by GE's risk assessment consultant, AMEC Earth & Environmental, for these evaluation areas under anticipated post-remediation conditions.

In accordance with the procedures specified in the SOW for area-specific risk evaluations, these evaluations were performed for all constituents that were retained for evaluation prior to the comparison to MCP Method 1 (Wave 2) soil standards, and were based on the same average concentrations of those constituents that were used in the comparisons to Method 1 (Wave 2) standards. These evaluations were based on the same exposure scenario that was assumed in developing the applicable PCB Performance Standards for recreational areas, as set forth in EPA's PCB risk evaluation in Attachment A to Appendix D to the CD. Specifically, the scenario evaluated was the child recreational user scenario for the 0- to 1-foot depth increment; and since EPA did not evaluate any specific exposure scenario for the 1- to 3-foot depth increment, the same child recreational user scenario was also applied to that increment or the 0- to 3-foot depth increment (as applicable) to be conservative.

In addition, the risk evaluations used the same exposure assumptions and parameter values that were used by EPA in Attachment A to Appendix D to the CD for developing the PCB Performance Standards for the same scenario, except that for chemical-specific parameters (i.e., oral and dermal absorption factors), the evaluations used values recommended by EPA or MDEP. The evaluations also used standard EPA cancer and non-cancer toxicity values – i.e., Cancer Slope Factors (CSFs) and non-cancer Reference Doses (RfDs) – as set forth on EPA's Integrated Risk Information System (IRIS) (or, for one compound that does not have such a value, the IRIS value for a surrogate compound), together with EPA's recommended Relative Potency Factors (RPFs) for carcinogenic polycyclic aromatic hydrocarbons (PAHs).

Based on these inputs, the risk evaluations calculated a cumulative Excess Lifetime Cancer Risk (ELCR) for the retained carcinogenic constituents and a Hazard Index (HI) for the retained constituents with non-cancer RfDs. The resulting ELCRs and HIs (after rounding) were then compared with the benchmarks set forth in the SOW of 1×10^{-5} for cancer risks and a HI of 1 for non-cancer impacts.

For one evaluation area where lead was retained, a different procedure had to be used since there are no EPA-prescribed toxicity values for lead. For lead exposures in children, EPA has developed a model, the Integrated Exposure Uptake Biokinetic Model (IEUBK), that allows one to calculate blood levels in children who have been exposed to lead. Using that model, AMEC previously back-calculated a risk-based concentration (RBC) for lead in soil, which is applicable to the child recreator scenario at recreational areas. That RBC is 1,313 ppm

and was previously approved by EPA for use in evaluating lead exposure in the area-specific risk evaluations at Newell Street Area I and other RAAs at the GE-Pittsfield/Housatonic River Site. The same RBC was used to evaluate lead exposures at Parcel I7-1-101.

The area-specific risk evaluations performed for the Phase 4 floodplain properties are described and the results presented in Appendix D to this RD/RA Work Plan, which was prepared at GE's request by AMEC. The results are summarized, where applicable, in the area-specific evaluations presented in Section 4.

Finally, it should be noted that EPA's PCB risk evaluation in Attachment A to Appendix D of the CD does not contain any exposure scenario or calculations for the 0- to X-foot depth increment (where X is the total depth of evaluation, as discussed in Section 3.2 above). Accordingly, there is no applicable risk evaluation scenario for that depth increment. Instead, since the applicable PCB Performance Standard for that depth increment (100 ppm) is the MCP Upper Concentration Limit (UCL) for PCBs in soil, the average concentrations of the retained non-PCB constituents in the 0- to X-foot depth increment at each area subject to an area-specific risk evaluation have been compared to the MCP (Wave 2) UCLs for those constituents.

4. PCB and Non-PCB Soil Evaluations for Group 4A Floodplain Properties

4.1 General

This section presents the results of the PCB and non-PCB Appendix IX+3 evaluations that were performed for the identified evaluation areas within the Group 4A floodplain properties in accordance with the procedures summarized in Section 3 of this RD/RA Work Plan.

In this section, the following information is presented for each of the evaluation areas in the Group 4A floodplain properties:

- Description of area;
- Evaluation of existing conditions with respect to PCBs and discussion of the need for remediation to achieve the PCB Performance Standards;
- For areas where data on other Appendix IX+3 constituents exist, evaluation of existing conditions with respect to those constituents and discussion of the need for remediation to address these constituents;
- Description of proposed remediation actions (shown on Technical Drawings provided in Appendix A);
- Evaluation of post-remediation conditions with respect to PCBs, if required; and
- Evaluation of post-remediation conditions with respect to other Appendix IX+3 constituents, if required.

The proposed soil removal actions for these properties are depicted in detail in Technical Drawing 7 in Appendix A, which shows the aerial extent and the depth and/or elevation of the proposed removal. Where such remediation extends to the riverbank of the East Branch of the Housatonic River being addressed by EPA, that drawing shows the top-of-bank line agreed upon between GE and EPA.

Following the discussion of the area-specific evaluations, this section presents an overall summary of the remediation actions proposed for the Group 4A floodplain properties, including soil removal volumes.

In support of the evaluations presented in this section, GE has prepared backup documentation for these evaluations. Specifically, spatial averaging tables and Theissen polygon maps developed in support of the area-specific PCB evaluations are presented in Appendix B and evaluation tables developed in support of the

Appendix IX+3 evaluations summarized herein are presented in Appendix C. Finally, the area-specific risk evaluations are presented in Appendix D.

4.2 Evaluations for Parcel I7-1-2

As indicated in the EPA-approved PDI Report, the performance of PCB and non-PCB evaluations for Parcel I7-1-2 was not necessary because PCBs were not detected in any sample collected within this evaluation area.

4.3 Evaluations for Parcel I7-1-5

As shown on Figure 1-2, Parcel I7-1-5 is a recreational property and is generally bordered by Pomeroy Avenue to the north, Parcel I7-1-101 to the south and west, and the riverbank to the East Branch of the Housatonic River to the east. As noted in Section 3.2, this property is owned by a utility company, and it is assumed that it will be subject to a Conditional Solution. Thus, the relevant depth increments for evaluation are 0 to 1 foot, 0 to 3 feet, and 0 to X feet. However, as indicated in the EPA-approved PDI Report, the X depth for evaluation at this property is also 3 feet, so the 0- to X-foot depth increment is identical to the 0- to 3-foot depth increment. Since this area is less than 0.5 acre in size, the NTE criterion does not apply.

In evaluating Parcel I7-1-5, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. The following table presents the existing average PCB concentrations calculated for property, together with references to the corresponding tables in Appendix B and the applicable Performance Standard:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-1	2.02	10
0 – 3'	B-2	3.10	10

In addition, since the 0- to X-foot depth increment at this property is identical to the 0- to 3-foot depth increment, the existing average PCB concentration for that depth increment is well below the Performance Standard of 100 ppm for the 0- to X-foot depth increment. Since the existing average PCB concentrations are below the applicable Performance Standards for all relevant depth increments, no remediation is required to achieve the applicable Performance Standards. However, since these existing averages are above the residential

Performance Standard of 2 ppm, a Conditional Solution would need to be implemented at this property. Finally, since no remediation is required to address PCBs, non-PCB Appendix IX+3 investigations were not performed at this parcel.

4.4 Evaluations for Parcel I7-1-101

As shown on Figure 1-2, Parcel I7-1-101 is a City-owned recreational property (Fred Garner Park) and is generally bordered by Pomeroy Avenue to the north, the riverbank to the West Branch of the Housatonic River to the south, Parcel I7-1-2 to the west, and the riverbank to the East Branch of the Housatonic River to the east. This property will be subject to an ERE. As discussed in Section 1.2, this parcel has been divided into two evaluation areas, namely I7-1-101 (West) and I7-1-101 (East). Each area will be discussed separately for the remainder of the evaluation. Since this property will be subject to an ERE, the relevant depth increments for evaluation at both areas are 0 to 1 foot, 1 to 3 feet, and 0 to X feet. Further, since both of these evaluation areas are greater than 0.5 acre, the NTE criterion of 50 ppm for the top foot of soil in unpaved areas applies.

4.4.1 PCB Evaluation – Existing Conditions for Parcel I7-1-101 (West)

The evaluation process for Parcel I7-1-101 (West) began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to this area where PCB concentrations are greater than 50 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 6 such soil sample locations (4A-SB-23, 4A-SB-28, BW-0002, F0389418, RB022041, and RB022042).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 3 feet (i.e., $X = 3'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-3	5.12	10
1 – 3'	B-4	3.36	15
0 – X' ($X = 3'$)	B-5	3.95	100

Although these existing average PCB concentrations are below the applicable Performance Standards for the specified depth increments, remediation will be necessary to address the exceedances of the NTE level in the top foot in this area.

4.4.2 Appendix IX+3 Evaluation – Existing Conditions for Parcel I7-1-101 (West)

The Appendix IX+3 data used in the evaluations for Parcel I7-1-101 (West) are presented in Table C-1.

4.4.2.1 Screening Evaluation for Parcel I7-1-101 (West)

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-2 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)anthracene
- Arsenic
- Thallium

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

4.4.2.2 Evaluation of Retained Constituents for Parcel I7-1-101 (West)

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the

applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-3, C-4, and C-5 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. However, the existing average concentrations of benzo(a)pyrene and dibenzo(a,h)anthracene in the 0- to 1-foot depth increment are greater than the applicable MCP Method 1 (Wave 2) soil standards, and the existing average concentration of benzo(a)pyrene in the 1- to 3-foot depth increment is very slightly above the Method 1 (Wave 2) standard. As discussed below, GE is proposing to remove the top foot of soil in the vicinity of sample location 4A-SB-16 to address elevated levels of benzo(a)pyrene and dibenzo(a,h)anthracene at this location.

4.4.3 Proposed Remediation for Parcel I7-1-101 (West)

Based on the evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I7-1-101 (West) to the limits shown on Technical Drawing 7 (Appendix A). This remediation will involve excavation of approximately 740 cubic yards of soil. Performance of these activities will result in the achievement of the PCB and Appendix IX+3 Performance Standards for this area, as demonstrated in Sections 4.4.4 and 4.4.5.

4.4.4 PCB Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (West)

The proposed remediation shown on Technical Drawing 7 will involve removal of the surface soils associated with the PCB sample results exceeding the NTE level. This removal will also further reduce the PCB spatial averages for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-6	1.79	10
1 – 3'	B-4	3.36	15
0 – X' (X = 3')	B-7	2.84	100

4.4.5 Appendix IX+3 Evaluation – Post Remediation Conditions for Parcel I7-1-101 (West)

As shown on Technical Drawing 7, GE will remove certain soils associated with the 0- to 1-foot depth increment at sample location 4A-SB-16 due to elevated benzo(a)pyrene and dibenzo(a,h)anthracene concentrations. The post-remediation concentrations of the retained constituents are presented in Tables C-6 (0-1' depth), C-4 (1-3' depth) and C-7 (0-X' depth). As shown in Tables C-6 and C-4, post-remediation averages will slightly exceed the MCP Method 1 (Wave 2) soil standards. Accordingly, an area-specific post-removal risk evaluation has been performed for this area.

This risk evaluation is included in Appendix D to this RD/RA Work Plan and indicates that, under post-removal conditions, cancer risks and non-cancer hazards due to the retained constituents in the 0- to 1-foot and 1- to 3-foot depth increments at this area do not exceed (after rounding) the benchmarks specified in the SOW. For the 0- to X-foot depth increment (where X = 3'), the average concentrations of all non-PCB constituents are below their respective UCLs, as presented in Table C-8. These evaluations demonstrate that the proposed remediation for this evaluation area will achieve the applicable Performance Standards for non-PCB Appendix IX+3 constituents.

4.4.6 PCB Evaluation – Existing Conditions for Parcel I7-1-101 (East)

The evaluation process for Parcel I7-1-101 (East) began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to this area where PCB concentrations are greater than 50 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 4 such soil sample locations (F0219208, RB021882, RB021922, and RB021941).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 6 feet (i.e., X = 6'). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-8	5.18	10
1 – 3'	B-9	9.15	15
0 – X' (X = 6')	B-10	4.51	100

Although these existing average PCB concentrations are below the applicable Performance Standards for the specified depth increments, remediation will be necessary to address the exceedances of the NTE level in the top foot in this area.

4.4.7 Appendix IX+3 Evaluation – Existing Conditions for Parcel I7-1-101 (East)

The Appendix IX+3 data used in the evaluations for Parcel I7-1-101 (East) are presented in Table C-9.

4.4.7.1 Screening Evaluation for Parcel I7-1-101 (East)

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-10 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)anthracene
- Arsenic
- Lead
- Sulfide
- Thallium

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

4.4.7.2 Evaluation of Retained Constituents for Parcel I7-1-101 (East)

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-11, C-12, and C-13 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. However, the existing average concentrations of benzo(a)pyrene and/or dibenzo(a,h)anthracene in the 0- to 1-foot depth increment are greater than the applicable MCP Method 1 (Wave 2) soil standards, and the existing average concentration of dibenzo(a,h)anthracene in the 1- to 3-foot depth increment exceeds the Method 1 (Wave 2) standard. As discussed below, GE is proposing to remove soil in the vicinity of sample location 4A-SB-5 (1- to 3-foot depth increment) to address elevated levels of PAHs at this location. In addition, based on review of the data, GE is proposing to remove soil in the vicinity of sample location 4A-SB-6 (0- to 1-foot depth increment) to address an elevated level of arsenic at that location.

4.4.8 Proposed Remediation for Parcel I7-1-101 (East)

Based on the evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I7-1-101 (East) to the limits shown on Technical Drawing 7 (Appendix A). This remediation will involve excavation of approximately 320 cubic yards of soil. Performance of these activities will result in the achievement of the PCB and Appendix IX+3 Performance Standards for this area, as demonstrated in Sections 4.4.9 and 4.4.10.

4.4.9 PCB Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (East)

The proposed remediation shown on Technical Drawing 7 will involve removal of the unpaved surface soils associated with the PCB sample results exceeding the NTE level. This removal will also further reduce the PCB spatial averages for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-11	4.43	10
1 – 3'	B-12	9.14	15
0 – X' (X = 6')	B-13	4.39	100

4.4.10 Appendix IX+3 Evaluation – Post-Remediation Conditions for Parcel I7-1-101 (East)

As shown on Technical Drawing 7, GE will remove certain soils associated with the 1- to 3-foot depth increment at sample location 4A-SB-5 due to elevated PAH concentrations and soils associated with the 0- to 1-foot depth increment at sample location 4A-SB-6 to address an elevated level of arsenic at that location. The post-remediation averages are presented in Tables C-14 (0-1' depth), C-15 (1-3' depth), and C-16 (0-X' depth). As shown in Table C-14, post-remediation averages of benzo(a)pyrene and/or dibenzo(a,h)anthracene will slightly exceed applicable MCP Method 1 (Wave 2) soil standards in the 0- to 1-foot depth increment. Accordingly, an area-specific post-removal risk evaluation has been performed for this area.

This risk evaluation is included in Appendix D to this RD/RA Work Plan and indicates that, under post-removal conditions, cancer risks and non-cancer hazards due to the retained constituents in the 0- to 1-foot and 1- to 3-foot depth increments at this area do not exceed (after rounding) the benchmarks specified in the SOW. It shows further that the post-remediation average concentrations of lead in soil in this area are far below the RBC of 1,313 ppm. For the 0- to X-foot depth increment (where X = 6'), the average concentrations of all non-PCB constituents are below their respective UCLs, as presented in Table C-17. These evaluations demonstrate that the proposed remediation for this evaluation area will achieve the applicable Performance Standards for non-PCB Appendix IX+3 constituents.

4.5 Utility Corridor Evaluations

As discussed in Section 3.2.4, where utilities potentially subject to emergency repair are present and the spatial average PCB concentration for the soils in the utility corridor exceeds 200 ppm, GE is required to evaluate the need for additional response actions. GE initially evaluated all of the PCB data at the Group 4A properties located within the utility corridors and compared these data to 200 ppm. At those locations where PCB data were identified as being greater than 200 ppm, GE then averaged all of the data within each of the individual borings. Since the average PCB concentration within each of the subject borings was below 200 ppm, it was

determined that the PCB spatial average (if calculated) would also be below 200 ppm. Therefore, it was not necessary to calculate spatial average PCB concentrations for utility corridors at the Group 4A properties.

4.6 Overall Summary

Based on the foregoing evaluations, the soil removal limits that will be necessary to meet the PCB and Appendix IX+3 Performance Standards at the Group 4A floodplain properties are shown on Technical Drawing 7 in Appendix A. The following table presents the estimated soil removal volume proposed for each property (if any).

Evaluation Area	Estimated Soil Removal Volume (cy)
I7-1-2	0
I7-1-5	0
I7-1-101 (West)	740
I7-1-101 (East)	320
Total:	1,060

5. PCB and Non-PCB Soil Evaluations for Group 4B Floodplain Properties

5.1 General

This section presents the results of the PCB and non-PCB Appendix IX+3 evaluations performed for the identified evaluation areas at the Group 4B floodplain properties. This section follows the same format used in Section 4, with the details of the proposed soil removal actions shown on Technical Drawing 8 in Appendix A.

5.2 Evaluations for Parcel I6-1-66

As shown on Figure 1-2, Parcel I6-1-66 is a residential property and is generally bordered by Parcel I6-1-67 to the north, the Group 4C properties to the south, the riverbank to the East Branch of the Housatonic River to the west, and Brunswick Street to the east. As discussed in Section 1.2, this parcel has been divided into two evaluation areas, namely I6-1-66 (East) and I6-1-66 (West). Each area has been evaluated separately.

5.2.1 Evaluations for Parcel I6-1-66 (East)

The sampling results from Parcel I6-1-66 (East) indicate no PCB concentrations greater than the residential standard of 2 ppm. As a result, no further evaluation of PCBs is necessary for this area. In addition, since no remediation is necessary to address PCBs, non-PCB investigations were not performed at this area.

5.2.2 PCB Evaluation – Existing Conditions for Parcel I6-1-66 (West)

Since Parcel I6-1-66 (West) is greater than 0.25 acre in size, the NTE criterion of 10 ppm for the top foot of soil in unpaved areas applies. Accordingly, the evaluation process for this area began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to the area where PCB concentrations are greater than 10 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 19 such soil sample locations (4B-SB-6, 4B-SB-8, 4B-SS-12, 4B-SS-16, 4B-SS-20, 4B-SS-25, I6-1-66A, I6-1-66B, R72AZ342, R72AZ366, R72AZ390, R72AZ414, R72BZ334, R72BZ357, R72CZ304, R72CZ326, RB021945, RB021966, and RD89FF025).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 5 feet (i.e., $X = 5'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standard:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-14	11.25	2
1 – X' ($X = 5'$)	B-15	1.84	2

Since the existing average PCB concentration for the 0- to 1-foot depth increment exceeds the Performance Standard, remediation is required to achieve that standard, as well as to address the exceedances of the NTE level in the top foot. In addition, although the existing average PCB concentration in the 1- to X-foot depth increment is below the applicable standard, GE has elected to remove all soil associated with discrete samples that showed PCB concentrations greater than 50 ppm at depths between 1 and 3 feet below the ground surface. There are 4 such samples within or affecting this property: R72AZ414 (1 - 1.5'), RB021945 (1 - 1.5'), and RB021966 (1 - 1.5' and 2 - 2.5').

5.2.3 Appendix IX+3 Evaluation – Existing Conditions for Parcel I6-1-66 (West)

The Appendix IX+3 data used in the evaluations for Parcel I6-1-66 (West) are presented in Table C-18.

5.2.3.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-19 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

-
- Benzo(a)anthracene
 - Benzo(a)pyrene
 - Benzo(b)fluoranthene
 - Dibenzo(a,h)anthracene
 - Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

5.2.3.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRG.

Tables C-20 and C-21 present the evaluations of retained constituents for the 0- to 1-foot and 1- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRG. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this evaluation area.

5.2.4 Proposed Remediation for Parcel I6-1-66 (West)

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-66 (West) to the limits shown on Technical Drawing 8 (Appendix A). This remediation will involve excavation of approximately 150 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 5.2.5.

5.2.5 PCB Evaluation – Post-Remediation Conditions for Parcel I6-1-66 (West)

The proposed remediation shown on Technical Drawing 8 will result in the removal of all surface soil with exceedances of the NTE level. It will also result in achievement of the PCB Performance Standard for the 0- to 1-foot depth increment and in a further reduction in the average PCB concentration in the 1- to X-foot depth increment, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-16	0.86	2
1 – X' (X = 5')	B-17	1.49	2

5.3 Evaluations for Parcel I6-1-67

As shown on Figure 1-2, Parcel I6-1-67 is a residential property and is generally bordered by another parcel (outside of Group 4B) to the north, Parcel I6-1-66 to the south, the riverbank to the East Branch of the Housatonic River to the west, and Brunswick Street to the east. As discussed in Section 1.2, this parcel has been divided into two evaluation areas, namely I6-1-67 (East) and I6-1-67 (West). Each area has been evaluated separately.

5.3.1 Evaluations for Parcel I6-1-67 (East)

The sampling results from Parcel I6-1-67 (East) indicate no PCB concentrations greater than the residential standard of 2 ppm. As a result, no further evaluation of PCBs is necessary for this area. In addition, since no remediation is necessary to address PCBs, non-PCB investigations were not performed at this area.

5.3.2 PCB Evaluation – Existing Conditions for Parcel I6-1-67 (West)

Since Parcel I6-1-67 (West) is greater than 0.25 acre in size, the NTE criterion of 10 ppm for the top foot of soil in unpaved areas applies. Accordingly, the evaluation process for this area began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to the area where PCB concentrations are greater than 10 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 5 such soil sample locations (4B-SS-12, I6-1-67A, RB021925, RB021945, and RB021946).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 3 feet (i.e., $X = 3'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standard:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-18	1.94	2
1 – X' ($X = 3'$)	B-19	1.86	2

Although these existing average PCB concentrations are below the applicable Performance Standard for the specified depth increments, remediation will be necessary to address the exceedances of the NTE level in the top foot in this area. In addition, although the existing average PCB concentration in the 1- to X-foot depth increment is below the applicable standard, GE has elected to remove all soil associated with discrete samples that showed PCB concentrations greater than 50 ppm at depths between 1 and 3 feet below the ground surface. There are 2 such samples affecting this property: RB021925 (1 - 1.5') and RB021945 (1 - 1.5').

5.3.3 Appendix IX+3 Evaluation – Existing Conditions for Parcel I6-1-67 (West)

The Appendix IX+3 data used in the evaluations for Parcel I6-1-67 (West) are presented in Table C-22.

5.3.3.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-23 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)pyrene
- Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

5.3.3.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRG.

Tables C-24 and C-25 present the evaluations of retained constituents for the 0- to 1-foot and 1- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRG. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this evaluation area.

5.3.4 Proposed Remediation for Parcel I6-1-67 (West)

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-67 (West) to the limits shown on Technical Drawing 8 (Appendix A). This remediation will involve excavation of approximately 40 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 5.3.5.

5.3.5 PCB Evaluation – Post-Remediation Conditions for Parcel I6-1-67 (West)

The proposed remediation shown on Technical Drawing 8 will result in the removal of all surface soil with exceedances of the NTE level. It will also further reduce the average PCB concentrations in the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-20	0.59	2
1 – 3'	B-21	1.31	2

5.4 Overall Summary

Based on the foregoing evaluations, the soil removal limits that will be necessary to meet the PCB Performance Standards at the Group 4B floodplain properties are shown on Technical Drawing 8 in Appendix A. The following table presents the estimated soil removal volume proposed for each property.

Parcel	Estimated Soil Removal Volume (cy)
I6-1-66 (West)	150
I6-1-67 (West)	40
Total:	190

6. PCB and Non-PCB Soil Evaluations for Group 4C Floodplain Properties

6.1 General

This section presents the results of the PCB and non-PCB Appendix IX+3 evaluations performed for the identified evaluation areas at the Group 4C floodplain properties. This section follows the same format used in Sections 4 and 5, with the details of the proposed soil removal actions shown on Technical Drawing 9 in Appendix A.

6.2 Evaluations for Parcel I6-1-62

As shown on Figure 1-2, Parcel I6-1-62 is a recreational property and is generally bordered by Parcel I6-1-104 to the north, Parcel I6-1-106 to the south, the riverbank to the East Branch of the Housatonic River to the west, and another parcel (outside of Group 4C) to the east. This property is owned by the State, and it is assumed that an ERE will be executed for this property. Thus, the relevant depth increments for evaluations are the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments. Since this area is greater than 0.5 acre in size, the NTE criterion of 50 ppm for the top foot of soil in unpaved areas applies.

6.2.1 PCB Evaluation – Existing Conditions

The evaluation process for Parcel I6-1-62 began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to the parcel where PCB concentrations are greater than 50 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 10 such soil sample locations (RA89N200, RB022046, RB89A050, RB89B175, RB89B200, RB89C175, RB89D125, RB89D175, RC89A175, and RC89B150).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 3 feet (i.e., $X = 3'$). The following

table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-22	16.21	10
1 – 3'	B-23	6.29	15
0 – X' (X = 3')	B-24	9.59	100

Since the existing average PCB concentration for the 0- to 1-foot depth increment exceeds the Performance Standard, remediation is required to achieve that standard, as well as to address the exceedances of the NTE level.

6.2.2 Appendix IX+3 Evaluation – Existing Conditions

The Appendix IX+3 data used in the evaluations for Parcel I6-1-62 are presented in Table C-26.

6.2.2.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-27 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene
- Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

6.2.2.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-28, C-29, and C-30 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this evaluation area.

6.2.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-62 to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 120 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.2.4.

6.2.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in the removal of all surface soil with exceedances of the NTE level. It will also result in achievement of the PCB Performance Standards for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-25	8.43	10
1 – 3'	B-23	6.29	15
0 – X' (X = 3')	B-27	7.00	100

6.3 Evaluations for Parcel I6-1-103

As shown on Figure 1-2, Parcel I6-1-103 is a recreational property and is generally bordered by Group 4B to the north, Parcel I6-1-104 to the south, the riverbank to the East Branch of the Housatonic River to the west, and Parcel I6-1-102 to the east. This property is owned by GE and will be subject to an ERE. Thus, the relevant depth increments for evaluation are the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments. Since this parcel is less than 0.5 acre in size, the NTE criterion does not apply.

6.3.1 PCB Evaluation – Existing Conditions

In evaluating Parcel I6-1-103, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 10 feet (i.e., $X = 10'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-27	49.77	10
1 – 3'	B-28	18.46	15
0 – X' ($X = 10'$)	B-29	16.43	100

As indicated above, the existing average PCB concentrations in the 0- to 1-foot and 1- to 3-foot depth increments exceed the Performance Standards. As a result, remediation is required to achieve those standards.

6.3.2 Appendix IX+3 Evaluation – Existing Conditions

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the Appendix IX+3 data used in the evaluations for Parcel I6-1-103 are presented in Table C-31.

6.3.2.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.3.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-32 identifies the detected constituents and provides a

comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene
- Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

6.3.2.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-33, C-34, and C-35 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this evaluation area.

6.3.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-103 to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 560 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.3.4.

6.3.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in the achievement of the PCB Performance Standards for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-30	7.44	10
1 – 3'	B-31	14.16	15
0 – X' (X = 10')	B-32	11.34	100

6.4 Evaluations for Parcel I6-1-102 (West)

As shown on Figure 1-2, Parcel I6-1-102 (West) is a portion of a residential property adjacent to Parcel I6-1-103. It is generally bordered by Group 4B to the north, Parcel I6-1-104 to the south, Parcel I6-1-103 to the west, and Brunswick Street to the east. Since this area is greater than 0.25 acre in size, the NTE criterion of 10 ppm for the top foot of soil in unpaved areas applies.

6.4.1 PCB Evaluation – Existing Conditions

The evaluation process for Parcel I6-1-102 (West) began by examining whether there were any soil sample locations in the top foot of unpaved portions within or adjacent to this area where PCB concentrations are greater than 10 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. Although no such soil sample locations were identified on Parcel I6-1-102 itself, this step resulted in the identification of 2 soil sample locations on adjacent Parcel I6-1-103 (4C-SS-31 and RD89CC000) that had PCB concentrations greater than 10 ppm and whose polygons extend onto Parcel I6-1-102 (West).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for the relevant depth increment at Parcel I6-1-102 (West). In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 1 foot; thus there was no need to evaluate a 1- to X-foot depth increment. The following table presents the existing average PCB concentration calculated for this area, together with reference to the corresponding table in Appendix B and the applicable Performance Standard:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-33	1.03	2

As shown in this table, the existing average PCB concentration in the 0- to 1-foot depth increment (the only depth increment evaluated) at this evaluation area is below the applicable Performance Standard. However, as noted above, remediation is still necessary at this area to address exceedances of the residential NTE level stemming from samples on adjacent Parcel I6-1-103.

6.4.2 Appendix IX+3 Evaluation – Existing Conditions

In accordance with the EPA-approved PDI Report, non-PCB investigations were not warranted for this parcel since the limited 1-foot removal to address NTE exceedances is driven by samples collected on an adjacent parcel and since the existing spatial average within Parcel I6-1-102 (West) itself is below the applicable PCB Performance Standard.

6.4.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-102 (West) to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 10 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.4.4.

6.4.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in removal of the surface soil with exceedances of the residential NTE level. It will also result in a further reduction in the average PCB concentration in the 0- to 1-foot depth increment, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-34	0.80	2

6.5 Evaluations for Parcel I6-1-104

As shown on Figure 1-2, Parcel I6-1-104 is a recreational property and is generally bordered by Parcel I6-1-103 to the north, Parcel I6-1-62 to the south, the riverbank to the East Branch of the Housatonic River to the west, and another parcel (outside of Group 4C) to the east. This property is owned by GE and will be subject to an ERE. Thus, the relevant depth increments for evaluation are the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments. Since this property is greater than 0.5 acre in size, the NTE criterion of 50 ppm applies.

6.5.1 PCB Evaluation – Existing Conditions

The evaluation process for Parcel I6-1-104 began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to the parcel where PCB concentrations are greater than 50 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 19 such soil sample locations (RC89A175, RC89B100, RC89B150, RC89B175, RC89C050, RC89C150, RC89C175, RC89D150, RC89E025, RC89E050, RC89E075, RC89E100, RC89E125, RC89E150, RD89B025, RD89B050, RD89B075, RD89B100, and RD89B125).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 6 feet (i.e., $X = 6'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-35	26.14	10
1 – 3'	B-36	9.42	15
0 – X' ($X = 6'$)	B-37	9.04	100

Since the existing average PCB concentration for the 0- to 1-foot depth increment exceeds the Performance Standard, remediation is required to achieve that standard, as well as to address the exceedances of the NTE level.

6.5.2 Appendix IX+3 Evaluation – Existing Conditions

The Appendix IX+3 data used in the evaluations for Parcel I6-1-104 are presented in Table C-36.

6.5.2.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-37 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

6.5.2.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-38, C-39, and C-40 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this property.

6.5.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-104 to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 390 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.5.4.

6.5.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in the removal of all surface soil with exceedances of the NTE level. It will also result in achievement of the PCB Performance Standards for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-38	6.93	10
1 – 3'	B-36	9.42	15
0 – X' (X = 6')	B-39	5.84	100

6.6 Evaluations for Parcel I6-1-106

As shown on Figure 1-2, Parcel I6-1-106 is a recreational property and is generally bordered by Parcel I6-1-62 to the north, another parcel (outside of Group 4C) to the south, the riverbank to the East Branch of the Housatonic River to the west, and Parcel I6-1-105 to the east. This property is owned by GE and will be subject to an ERE. Thus, the relevant depth increments for evaluation are the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments. Since this property is greater than 0.5 acre in size, the NTE criterion of 50 ppm applies.

6.6.1 PCB Evaluation – Existing Conditions

The evaluation process for Parcel I6-1-106 began with the identification of soil sample locations in the top foot of unpaved portions within or adjacent to the parcel where PCB concentrations are greater than 50 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the NTE level. This step resulted in the identification of 48 such soil sample locations (I6-1-61C, RA89A150, RA89A175, RA89A200, RA89AA025, RA89B125, RA89B150, RA89B175, RA89B200, RA89B225, RA89BB025, RA89C125,

RA89C150, RA89C175, RA89C200, RA89C225, RA89CC025, RA89D050, RA89D100, RA89D125, RA89D150, RA89D175, RA89D200, RA89E125, RA89E175, RA89E200, RA89F025, RA89F150, RA89F175, RA89G025, RA89G050, RA89G075, RA89G150, RA89G175, RA89H025, RA89H050, RA89H175, RA89I175, RA89J050, RA89J150, RA89L150, RA89L200, RA89M200, RA89N175, RA89N200, RB022066, RB032106, and RB89A050).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments. In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 3 feet (i.e., $X = 3'$). The following table presents the existing average PCB concentrations calculated for this area, together with references to the corresponding tables in Appendix B and the applicable Performance Standards:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-40	30.86	10
1 – 3'	B-41	8.34	15
0 – X' ($X = 3'$)	B-42	15.85	100

Since the existing average PCB concentration for the 0- to 1-foot depth increment exceeds the Performance Standard, remediation is required to achieve that standard, as well as to address the exceedances of the NTE level.

6.6.2 Appendix IX+3 Evaluation – Existing Conditions

The Appendix IX+3 data used in the evaluations for Parcel I6-1-106 are presented in Table C-41.

6.6.2.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-42 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, the following constituents have maximum detected concentrations that exceed their corresponding Screening PRGs:

-
- Benzo(a)anthracene
 - Benzo(a)pyrene
 - Benzo(b)fluoranthene
 - Indeno(1,2,3-cd)pyrene
 - Arsenic

These constituents were retained for further evaluation, along with dioxin/furan TEQs.

6.6.2.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituents retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentrations (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standards and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRGs.

Tables C-43, C-44, and C-45 present the evaluations of retained constituents for the 0- to 1-foot, 1- to 3-foot, and 0- to X-foot depth increments, respectively. As indicated in those tables, all dioxin/furan TEQ concentrations are below the applicable PRGs. In addition, average concentrations of all of the retained constituents are less than their corresponding MCP Method 1 (Wave 2) soil standards. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this property.

6.6.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-106 to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 990 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.6.4.

6.6.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in the removal of all surface soil with exceedances of the NTE level. It will also result in achievement of the PCB Performance Standards for the relevant depth increments, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-43	9.72	10
1 – 3'	B-41	8.34	15
0 – X' (X = 3')	B-44	8.80	100

6.7 Evaluations for Parcel I6-1-105 (West)

As shown on Figure 1-2, Parcel I6-1-105 (West) is a portion of a residential property adjacent to Parcel I6-1-106. It is generally bordered by another parcel (outside of Group 4C) to the north, another parcel (outside of Group 4C) to the south, Parcel I6-1-106 to the west, and Brunswick Street to the east. Since this area is greater than 0.25 acre in size, the NTE criterion of 10 ppm for the top foot of soil in unpaved areas applies.

6.7.1 PCB Evaluation – Existing Conditions

The evaluation process for Parcel I6-1-105 (West) began by examining whether there were any soil sample locations in the top foot of unpaved portions within or adjacent to this area where PCB concentrations are greater than 10 ppm. Such soils are subject to removal in accordance with the SOW to address exceedance(s) of the residential NTE level. Although no such soil sample locations were identified on Parcel I6-1-105 itself, this step resulted in the identification of 3 soil sample locations on adjacent Parcel I6-1-106 (RA89DD075, RA89EE050, and RA89JJ000) that had PCB concentrations greater than 10 ppm and whose polygons extend onto Parcel I6-1-105 (West).

In addition, the available PCB soils data and the spatial averaging procedures discussed in Section 3 were used to calculate average PCB concentrations for each of the relevant depth increments at Parcel I6-1-105 (West). In accordance with the EPA-approved PDI Report, the PCB evaluations were conducted to a depth of 1 foot; thus, there was no need to evaluate a 1- to X-foot depth increment. The following table presents the existing average PCB concentration calculated for this area, together with reference to the corresponding table in Appendix B and the applicable Performance Standard:

Depth Increment	Appendix B Table Reference	Existing Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-45	0.25	2

As shown in this table, the existing average PCB concentration in the 0- to 1-foot depth increment (the only depth increment evaluated) at this evaluation area is below the applicable Performance Standard. However, as noted above, remediation is still necessary at this area to address exceedances of the residential NTE level stemming from samples on adjacent Parcel I6-1-106.

6.7.2 Appendix IX+3 Evaluation – Existing Conditions

The Appendix IX+3 data used in the evaluations for Parcel I6-1-105 (West) are presented in Table C-46.

6.7.2.1 Screening Evaluation

Consistent with the protocols established in the SOW and summarized in Section 3.5.3 of this RD/RA Work Plan, the maximum concentration of each detected non-PCB constituent (other than dioxins/furans) was compared to its corresponding Screening PRG. Table C-47 identifies the detected constituents and provides a comparison of the maximum detected concentration for each of those constituents to the applicable Screening PRG. As shown in that table, one constituent, arsenic, has a maximum detected concentration that exceeds the corresponding Screening PRG. This constituent was retained for further evaluation, along with dioxin/furan TEQs.

6.7.2.2 Evaluation of Retained Constituents

For the Appendix IX+3 constituent retained for further evaluation, the next component of the Appendix IX+3 evaluation involved the comparison of average constituent concentration (except for dioxin/furan TEQs) to the applicable MCP Method 1 (Wave 2) soil standard and comparison of maximum dioxin/furan TEQ concentrations to the applicable EPA PRG.

Table C-48 presents the evaluation of retained constituents for the 0- to 1-foot depth increment. As indicated in this table, all dioxin/furan TEQ concentrations are below the applicable PRG. In addition, the average arsenic concentration is less than the corresponding MCP Method 1 (Wave 2) soil standard. As a result, no remediation is necessary to achieve the Appendix IX+3 Performance Standards at this evaluation area.

6.7.3 Proposed Remediation

Based on the PCB evaluations presented above, GE is proposing to conduct soil removal/replacement activities at Parcel I6-1-105 (West) to the limits shown on Technical Drawing 9 (Appendix A). This remediation will involve excavation of approximately 15 cubic yards of soil. Performance of these activities will result in the achievement of the PCB Performance Standard for this area, as demonstrated in Section 6.7.4.

6.7.4 PCB Evaluation – Post-Remediation Conditions

The proposed remediation shown on Technical Drawing 9 will result in the removal of the surface soil with exceedances of the residential NTE level. It will also result in a further reduction in the average PCB concentration in the 0- to 1-foot depth increment, as indicated in the following table.

Depth Increment	Appendix B Table Reference	Post-Remediation Average PCB Concentration (ppm)	Performance Standard (ppm)
0 – 1'	B-46	0.15	2

6.8 Utility Corridor Evaluations

As discussed in Section 3.2.4, where utilities potentially subject to emergency repair are present and the spatial average PCB concentration for the soils in the utility corridor exceeds 200 ppm, GE is required to evaluate the need for additional response actions. GE initially evaluated all of the PCB data at the Group 4C properties located within the utility corridors and compared these data to 200 ppm. At those locations where PCB data were identified as being greater than 200 ppm, GE averaged all of the data within each of the individual borings. Since the average PCB concentration within each of the subject borings was below 200 ppm, it was determined that the PCB spatial average (if calculated) would also be below 200 ppm. Therefore, it was not necessary to calculate spatial average PCB concentrations for utility corridors at the Group 4C properties.

6.9 Overall Summary

Based on the foregoing evaluations, the soil removal limits that will be necessary to meet the PCB Performance Standards at the Group 4C floodplain properties are shown on Technical Drawing 9 in Appendix A. The following table presents the estimated soil removal volume proposed for each property.

Parcel	Estimated Soil Removal Volume (cy)
I6-1-62	120
I6-1-102 (West)	10
I6-1-103	560
I6-1-104	390
I6-1-105 (West)	15
I6-1-106	990
Total:	2,085

7. Design Information

7.1 General

This section provides additional design-related information for the remediation activities at the Phase 4 floodplain properties. These activities generally consist of excavation of impacted material, disposal of this material at On-Plant Consolidation Areas (OPCAs) located at the GE Pittsfield facility, backfilling of excavations with clean material, and general site restoration. As discussed in Section 8, GE will select a Remediation Contractor to perform the remediation actions proposed herein. Section 8 provides further details regarding that selection process, while Section 9 provides additional site-specific implementation details associated with construction of the various design components.

7.2 Technical Specifications

Technical design information regarding soil removal within the Phase 4 floodplain properties is provided in this RD/RA Work Plan. In addition, certain of the plans comprising GE's Project Operations Plan (POP) provide additional design, construction, and implementation-related information relevant to the construction activities. With the exception of the FSP/QAPP and Health and Safety Plan (HASP) (which was provided to EPA for informational purposes only), the latest revisions to the POP were conditionally approved by EPA in a letter dated April 24, 2003, and were submitted to EPA on July 14, 2003.

The POP contains a series of plans that address several common aspects of the Removal Actions Outside the River and apply to various activities to be conducted as part of those Removal Actions, ranging from initial pre-design activities to the performance and completion of remediation activities. Collectively, these plans describe the minimum requirements, general activities, protocols, and methodologies applicable to these Removal Actions. These plans include a Waste Characterization Plan, Soil Cover/Backfill Characterization Plan, Site Management Plan, Ambient Air Monitoring Plan, and Contingency and Emergency Procedures Plan. The POP also includes a Construction Quality Assurance Plan (CQAP), which provides technical requirements related to items such as backfill, topsoil, seeding, mulch, etc. In addition, the CQAP specifies activities that are relevant to certain of the construction activities, such as soil placement and grading/compaction, survey control, etc. The general provisions of the POP are applicable to the Phase 4 floodplain properties construction activities and are incorporated herein by reference.

The various design details are summarized in this RD/RA Work Plan, but are more specifically described in the Technical Drawings and Specifications developed by GE for use in selecting a Remediation Contractor. Copies of the Technical Drawings and Specifications are provided in Appendices A and E and include those related to soil removal as well as other construction elements.

7.3 Soil Removal Activities

As described in Sections 4.5, 5.4 and 6.8, GE will remove approximately 3,335 cubic yards of soil from the Phase 4 floodplain properties. The removal limits are shown on Technical Drawings 7, 8, and 9 in Appendix A. As noted above, where the soil removal extends to the riverbank of the East Branch of the Housatonic River, the drawings show the top-of-bank line agreed upon between GE and EPA.

Prior to initiating removal activities for the areas subject to soil removal, the horizontal limits of removal will be surveyed and staked in the field. During removal activities, field measurements will be made to verify that the target removal depths/elevations have been achieved for each excavation area. Excavated soils will be transported to and consolidated at either the Building 71 or the Hill 78 OPCA, as further described in Section 9.5.2. Following removal, common backfill will be obtained from an off-site source (Sections 7.4 and 9.5.3) and will be placed and compacted to re-establish original grade. The provisions specified on the Technical Drawings (Appendix A) and in the Technical Specifications (Appendix E) and POP (including the Soil Cover/Backfill Characterization Plan and the CQAP) will be utilized during the removal and backfill activities.

7.4 Backfilling Excavations

Soil fill and topsoil components will be used to backfill the excavations at the Phase 4 floodplain properties. Information regarding the measurement, composition, and installation of acceptable backfill materials is provided on the Technical Drawings and in the Technical Specifications provided in Appendices A and E, respectively.

The specific fill sources to be used for this project will be identified by the selected Remediation Contractor. The backfill materials to be used at these properties will originate either from existing sources or from new, currently unidentified sources of backfill material. Existing sources of backfill material consist of those sources that have been previously used for other GE remediation projects in Pittsfield and have been previously qualified for such use in submittals to EPA and/or MDEP. The sample data presented in those documents

include analyses for PCBs and Appendix IX+3 volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals. If such existing, approved sources have been used by GE within the past 18 months, these prior analytical data will not be resubmitted to EPA. For any backfill materials from a source that has not already been identified and characterized, representative samples of proposed fill materials will be collected and analyzed for PCBs and Appendix IX+3 VOCs, SVOCs, and metals, as required by GE's approved Soil Cover/Backfill Characterization Plan provided in the POP. The name of the proposed backfill source location and the results of the analyses for PCBs and Appendix IX+3 VOCs, SVOCs, and metals (if necessary) will be submitted to EPA in a supplemental information package prior to use of such material.

Restoration of disturbed areas is discussed further in Section 9.5.5 below.

7.5 Flood Storage Capacity

For soil removal/replacement activities, it is expected that the excavation and backfill/restoration activities will be conducted in such a manner as to re-establish the same general ground surface and topography of the affected areas (to the extent feasible). GE does not foresee any impact on the flood storage capacity from these actions.

7.6 Applicable or Relevant and Appropriate Requirements

The remediation actions to be conducted at the Phase 4 floodplain properties will be subject to several ARARs. Attachment B to the SOW identifies the chemical-, action-, and location-specific ARARs for Removal Actions Outside the River. As noted above, the Removal Action for the Phase 4 floodplain properties includes soil removal/replacement. These activities will be performed within the 100-year floodplain of the Housatonic River. In these circumstances, this Removal Action is subject to the following ARARs identified in Attachment B to the SOW: action-specific ARARs identified in Table 2, subsection B ("Soil Removal"), subsections I and J (regarding consolidation of excavated soils at the OPCAs), and potentially subsection K ("Other"); and location-specific ARARs identified in Table 3, subsection B ("Floodplains, Wetlands, and Banks"). If excavation activities involve removal and on-site storage (at the GE Plant Area) of free product, intact drums, and/or other materials that cannot be consolidated at the OPCAs, and thus will be subsequently disposed off site, the ARARs identified in Table 2, subsection H ("Temporary On-Site Storage of Free Product, Drums, and Equipment That Will Be Disposed of Off-Site") of Attachment B to the SOW will apply to such storage. In addition, disposition of excavated materials at GE's OPCAs will be subject to the ARARs for consolidation at the OPCAs (set forth in Table 1 of the Detailed Work Plan for OPCAs).

A summary of the ARARs that were considered with respect to the remediation proposed herein, along with the associated project component(s) and means by which the ARAR is addressed by the design and implementation activities, is as follows:

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
Toxic Substances Control Act (TSCA) Regulations (PCB Remediation Waste) (40 CFR 761.61)	<ul style="list-style-type: none"> • Soil removal 	<ul style="list-style-type: none"> • EPA has determined that Removal Actions conducted in accordance with the CD and SOW will not pose an unreasonable risk of injury to health or the environment.
TSCA Regulations (Decontamination) (40 CFR 761.79)	<ul style="list-style-type: none"> • Soil removal (equipment cleaning) 	<ul style="list-style-type: none"> • Will be attained by cleaning equipment as necessary in accordance with TSCA regulations (see Section 9.5.4).
Resource Conservation and Recovery Act (RCRA) Hazardous Waste Regulations (40 CFR 261.24)	<ul style="list-style-type: none"> • Soil removal 	<ul style="list-style-type: none"> • GE will review the relevant Appendix IX+3 data from the soils to be excavated, using a conservative screening tool (i.e., dividing the total sample results by 20) and comparing the results to allowable concentration limits associated with the Toxicity Characteristic Leaching Procedure (TCLP) under these regulations. If exceedances result from this comparison, soils will be placed in the Building 71 OPCA. Other soils will be subject to placement in either OPCA.
Clean Water Act NPDES Regulations (Stormwater Discharges) (40 CFR 122.44(k); 40 CFR 122.26(c)(ii)(C); 40 CFR 125.100-.104)	<ul style="list-style-type: none"> • Soil removal 	<ul style="list-style-type: none"> • Implementation of erosion and sedimentation controls (Section 9.4.5).
Massachusetts Air Pollution Control Requirements (310 CMR 7.09)	<ul style="list-style-type: none"> • Soil removal 	<ul style="list-style-type: none"> • Implementation of dust control measures (as necessary) and air monitoring (Sections 9.5.1 and 9.6).

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
TSCA Regulations (Storage for Disposal) (40 CFR 761.61; 40 CFR 761.65)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • Temporary storage of free product and liquids in tanks or containers at GE's existing on-plant tank system or hazardous waste storage facility, both of which meet the long-term PCB storage requirements of TSCA. • Temporary storage of drums and other equipment in containers at GE's existing on-plant hazardous waste storage facility, which meets the long-term PCB storage requirements of TSCA.
TSCA Regulations (PCB Marking Requirements) (40 CFR 761.40)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • Will be attained by marking PCB items in accordance with these requirements.
RCRA Hazardous Waste Regulations (Storage of Hazardous Waste) (40 CFR 264, Subparts I and J 40 CFR 262.34)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • Temporary storage of free product and liquids in tanks or containers at GE's existing on-plant tank system or hazardous waste storage facility, both of which meet the long-term PCB storage requirements of TSCA. • Temporary storage of drums and other equipment in containers at GE's existing on-plant hazardous waste storage facility. • Storage of materials in tanks will be limited to 90 days or less and will meet the substantive requirements for up to 90-day accumulation in tanks. • Materials in containers will be stored at GE's hazardous waste storage facility, which meets the requirements for long-term storage of hazardous waste in containers.
RCRA Hazardous Waste Management/Disposal Facilities Regulations (Preparedness and Prevention) (40 CFR 264, Subpart C)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • GE's existing on-plant hazardous waste storage facility meets these requirements.

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
RCRA Hazardous Waste Management/Disposal Facilities Regulations (General) (40 CFR 264.13 - .19)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • Operation of GE's existing on-plant hazardous waste storage facility meets these requirements.
RCRA Hazardous Waste Management/Disposal Facilities Regulations (Closure) (40 CFR 264.111 - .115)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • Upon termination of operations, GE's existing on-plant hazardous waste storage facility will be closed in accordance with the substantive requirements of these regulations.
Massachusetts Hazardous Waste Regulations (Storage of Hazardous Waste) (310 CMR 30.680, 30.690, 30.340)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • See discussion of Federal RCRA Hazardous Waste Regulations (Storage of Hazardous Waste) above.
Massachusetts Hazardous Waste Regulations (Closure) (310 CMR 30.580)	<ul style="list-style-type: none"> • Temporary storage of removed materials 	<ul style="list-style-type: none"> • See discussion of Federal RCRA Hazardous Waste Regulations (Closure) above.
ARARs Relating to Disposition of Excavated Materials in OPCAs	<ul style="list-style-type: none"> • Permanent consolidation of removed materials at OPCAs 	<ul style="list-style-type: none"> • Refer to August 25, 1999 letter from GE to EPA re: <i>Supplemental Addendum to June 1999 Detailed Work Plan</i>, for relevant ARARs relating to disposition of excavated material at the OPCAs and means of addressing such ARARs.
TSCA Spill Cleanup Policy (40 CFR 761, Subpart G)	<ul style="list-style-type: none"> • New PCB spills (if any) during on-site activities 	<ul style="list-style-type: none"> • GE will consider and address cleanup policy for any new PCB spills that occur during the work.
Executive Order for Floodplain Management [Exec. Order 11988 (1977); 40 CFR Part 6, App. A; 40 CFR 6.302(b)]	<ul style="list-style-type: none"> • Soil removal activities in floodplain 	<ul style="list-style-type: none"> • No practical alternative with less adverse impact on floodplain. • Implementation of erosion and sedimentation controls (Section 9.4.5). • Excavation and backfill/restoration will be conducted in a manner to avoid a loss in flood storage capacity (Section 7.5). • Restoration of habitat (Section 9.5.5).

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
Massachusetts Wetlands Protection Act and Regulations [MGL c. 131 §40; 310 CMR 10.53(3)(q); 310 CMR 10.54 - .58]	<ul style="list-style-type: none"> • Soil removal • Placement of fill materials within 100-year floodplain 	<ul style="list-style-type: none"> • No practical alternative with less adverse impact on resource areas. • All practical measures will be taken to minimize adverse impact on river. • Implementation of erosion and sedimentation controls (Section 9.4.5). • Excavation and backfill/restoration will be conducted in a manner to avoid a loss in flood storage capacity (Section 7.5). • Restoration of disturbed vegetation and, if necessary, the natural pool at Parcel I6-1-106 (Section 9.5.5).

In addition to the requirements specified above, if any historic or prehistoric artifacts or sites or if any threatened or endangered species are identified in the Phase 4 floodplain properties during the course of the remediation work, GE will notify EPA and discuss with EPA the need for and scope of additional actions, if any, regarding such resources.

8. Contractor Selection

GE will select a Remediation Contractor that is qualified to complete the on-site soil remediation/construction activities. GE anticipates selecting a Remediation Contractor following receipt of EPA approval of this Work Plan.

Upon selection, the Remediation Contractor will be responsible for providing several submittals to GE, including those identified in Section 9.3 of this RD/RA Work Plan. GE will subsequently provide the Contractor information and submittals to EPA in a supplemental information package, as described in Section 11 of this RD/RA Work Plan.

9. Implementation Plan

9.1 General

As indicated in Section 7.2, the POP contains a series of plans that address several common aspects for Removal Actions Outside the River. As relevant, those plans will be followed during implementation of the Removal Action associated with the Phase 4 floodplain properties.

As a supplement to the implementation-related procedures specified in the POP plans, this section provides additional details regarding certain construction activities. Specifically, this section identifies the requirements for project-specific plans to be submitted by the selected Remediation Contractor, describes site-specific elements of the site preparation and construction activities, and summarizes the project-specific perimeter air monitoring approach.

9.2 Project Participants

To the extent possible, the following table identifies the key project participants involved in the design and implementation of the remediation/construction activities summarized herein, along with their project roles and contact information:

Organization/Contact	Role	Address and Phone Number
United States Environmental Protection Agency William P. Lovely, Jr.	<ul style="list-style-type: none">- Lead regulatory agency.- Review and approval of Final Work Plan.- Oversight of Removal Actions.	USEPA Region 1 One Congress Street, Suite 1100 Boston, MA 02114-2023 (617) 918-1240
General Electric Company Richard W. Gates	<ul style="list-style-type: none">- Supervise pre-design, construction, and documentation activities related to the Phase 3, Group 3A and 3B Floodplain Properties Removal Action.- Supervise implementation of the Removal Action and related activities to ensure they are conducted in accordance with the CD.- Direct/coordinate activities of the Remediation Contractor and other GE-contracted organizations.- Responsible for preparation of a Final Completion Report.	General Electric Company 159 Plastics Avenue Building 59 Pittsfield, MA 01201 (413) 448-5909

Organization/Contact	Role	Address and Phone Number
Blasland, Bouck & Lee, Inc. James M. Nuss, P.E., LSP	<ul style="list-style-type: none"> - Supervising Remediation Contractor for GE. - Review Remediation Contractor submittals. - Project coordination and documentation. - Provide technical assistance related to implementation of the Removal Action. - Assist in verifying that the Removal Action is complete and performed in accordance with the Work Plan. - Prepare Final Completion Report. 	Blasland, Bouck & Lee, Inc. 6723 Towpath Road Syracuse, NY 13214 (315) 446-9120
Berkshire Environmental Consultants, Inc. Maura Hawkins	<ul style="list-style-type: none"> - Design and implement perimeter air monitoring in conjunction with construction activities. 	Berkshire Environmental Consultants, Inc. 152 North Street, Suite 250 Pittsfield, MA 01201 (413) 443-0130
Remediation Contractor (To be determined)	<ul style="list-style-type: none"> - Implement all construction-related activities. 	(To be determined)

9.3 Contractor Submittals

Once selected, the Remediation Contractor will be required to provide certain pre-mobilization submittals to demonstrate that the Contractor: a) has an adequate understanding of the scope of the Removal Action; b) has developed a project-specific sequence that can efficiently perform all on-site activities within the allowable schedule; c) will utilize acceptable materials, products, and procedures; and d) will perform all activities in a manner that is protective of on-site workers and the surrounding community. Certain of those submittals relate to the manner in which the work activities will be implemented and, as such, will supplement the information and procedures presented in this RD/RA Work Plan. Those submittals include an Operations Plan, Health and Safety Plan (HASP), and Contingency Plan. Each of these submittals is further described below.

Operations Plan

The purpose of the Operations Plan is to summarize the materials, procedures, timelines, and controls that the Contractor intends to utilize during project activities. This plan will be prepared in consultation with GE and its Supervising Contractor and will include the following:

-
- List of equipment to be used on site;
 - Residential property protection procedures;
 - Work Schedule;
 - The Contractor's proposed plan for controlling vehicular and pedestrian traffic during the performance of construction activities;
 - Proposed excavation stabilization measures (if any);
 - The Contractor's qualifications package (if requested by GE);
 - Stormwater (including run-on and run-off), erosion, noise, and dust control measures;
 - The Contractor's proposed excavation approach;
 - Materials handling and staging approach; and
 - Equipment cleaning procedures.

HASP

The HASP will identify the Remediation Contractor's project-specific health and safety procedures and will be developed to address the minimum requirements established in the POP and 29 CFR 1910 and 1926. The plan will address those activities to be undertaken by the Contractor and present required information including, but not limited to, the following (as applicable):

- Training;
- Identification of key personnel (including the Contractor's Health and Safety Officer);
- Medical surveillance;
- Site hazards;
- Work zones;
- Personal safety equipment and protective clothing;
- Personal air monitoring;
- Personnel/equipment cleaning;
- Confined space entry;
- Construction safety procedures;
- Standard operating procedures and safety programs; and
- Material safety data sheets.

Contingency Plan

The Contingency Plan will set forth procedures for responding to emergency conditions or events that may occur during the performance of the Removal Action, and will include the following information:

- A spill prevention control and countermeasures plan for all materials brought on the work site;
- Emergency vehicular access/egress;
- Evacuation procedures of personnel from the work site;
- For work sites that include or are adjacent to a surface water drainageway, a flood control contingency plan identifying measures to protect the work site(s) and the waterway from impact in the event of high water and/or flood conditions;
- A list of all contact personnel, with phone numbers and procedures for notifying each;
- Routes to local hospitals; and
- Identification of responsible personnel who will be in a position at all times to receive incoming phone calls and to dispatch Contractor personnel and equipment in the event of an emergency situation.

In addition to the required pre-mobilization document submittals specified above, the Remediation Contractor will be required to prepare a submittal(s) specifying the sources and, if necessary, the corresponding analytical data for proposed backfill sources to be used during the performance of this project.

Once developed by the selected Remediation Contractor and approved by GE, each of the above-listed Contractor submittals will be submitted to EPA in a supplemental information package. In addition to these submittals, the Contractor is required to provide GE with various other submittals over the course of this project. The overall purpose of such submittals is to verify that the materials and procedures used in the construction activities are consistent with the design of the Removal Action. In accordance with the POP, all Contractor submittals will be tracked to confirm their receipt and approval. A copy of the Technical Submittal Register is provided in Appendix F. (Please note that submittals required by GE but not subject to submittal to EPA as part of the supplemental information package have been shaded.)

9.4 Site Preparation

General site preparation activities for the Phase 4 floodplain properties are shown on Technical Drawings 4, 5, and 6. Immediately prior to or following mobilization to the work area, the selected Remediation Contractor will perform several site preparation activities to establish the necessary site controls, features, and procedures for subsequent implementation of the construction activities. These activities include the following:

- Obtaining utility clearances;
- Establishing site controls and access;
- Site survey and layout;
- Installing erosion and sedimentation control measures; and
- Surface preparation.

General information regarding various site preparation activities (e.g., coordinating with local utilities, permitting, verifying existing conditions, establishing work areas, etc.) is provided in the general CQAP (part of the POP); the information provided below supplements that CQAP by providing additional site-specific details associated with certain of these activities.

9.4.1 Utility Clearances

Aboveground and underground utilities that could potentially be affected by the construction activities will be identified prior to initiating any intrusive subsurface activities (e.g., soil excavation, etc.). As indicated on Technical Drawings 1, 2, and 3, certain above-ground and subsurface utilities are known to be present within and adjacent to the Phase 4 floodplain properties. Subsurface utilities include sanitary and sewer lines, and aboveground utilities include any overhead power lines located on each of the parcels. The selected Contractor will be responsible for coordinating with DIGSAFE to determine the locations of all utilities at the start of the work and coordinating with the owners of the utilities regarding relocation/termination of any utilities, as required.

9.4.2 Work Area Security

The level of work area security will depend on the activities being performed and the location of those activities. Security measures will be selected in consultation with the Remediation Contractor and may consist of temporary fencing or barriers, maintenance of sign-in/sign-out sheets, and implementation of safe work practices, as described below. In addition, GE will coordinate with EPA throughout the performance of response actions regarding security implementation.

Temporary Fencing - Temporary construction fencing will be installed, as needed, to delineate and secure areas during ongoing construction activities. While other fencing configurations of equivalent performance may be considered, such temporary fencing is expected to be at least 4 feet in height, constructed of high-density polyethylene, and orange in color.

Sign-In/Sign-Out Sheet - For the duration of construction activities, a sign-in/sign-out sheet will be maintained for the work site. All on-site personnel and visitors will be required to sign in upon entering the work area and sign out upon leaving.

Safe work practices will also be employed at this work site. These activities may include any of the following:

Daily Safety Meetings - Such meetings, commonly referred to as tailgate meetings, are typically held with the Contractor to discuss hazards potentially encountered during the planned daily activities.

Posting of Warning Tape - To restrict access during construction activities, warning tape may be installed at locations to delineate certain areas, such as the exclusion zone, contaminant reduction zone, and/or support zone.

Use of Flagmen or Other Signaling Devices - Certain excavation activities in high traffic areas may necessitate the use of flagmen or other signaling devices (i.e., flashing beacons mounted on sawhorses).

9.4.3 “Clean” Access Area

Since a number of activities will require periodic access/egress between the work site and adjacent areas, a “clean” transition area will be established. Such an area will be used for equipment/material delivery and for the positioning of trucks for subsequent loading and off-site transport of excavated materials. It is expected that each transport area will be constructed of gravel or a layer of geotextile fabric and will be properly delineated from the remainder of the property. The specific location and construction of the access area will be developed by the Remediation Contractor in accordance with the anticipated progression of the construction actions, as well as other factors such as the layout of the site, traffic patterns, and material handling procedures.

9.4.4 Survey Control

In accordance with the CQAP, survey controls will be established at the start of the work and maintained throughout the construction activities. GE will provide survey benchmarks so that the Remediation Contractor can establish appropriate horizontal and vertical control consistent with the existing survey data. As stated in the CQAP, the Remediation Contractor will establish a minimum 50-foot control grid within the Phase 4 floodplain properties. This survey will be performed to verify that the horizontal and vertical limits of removals have been obtained and the final surface grade has been achieved.

9.4.5 Erosion and Sedimentation Control Measures

Erosion and sedimentation control measures will be implemented to minimize the potential for erosion of exposed soils and subsequent accumulation of materials in site drainage pathways. In addition, these measures will be used to divert rainfall runoff from entering work areas and open excavations.

For these groups of floodplain properties, erosion control measures to be implemented will include placement of hay bales and/or staked silt fencing along the downhill side of the work areas, plus additional area-specific measures, as required. The approximate location and layout of the hay bales/siltation fencing are indicated on Technical Drawings 4, 5, and 6. GE will coordinate with EPA during the installation of erosion controls along the boundaries of areas to be addressed by GE and those to be addressed by EPA. Fencing will be placed at the start of the site work activities and will be maintained until a good stand of vegetation is established. In addition to the hay bale/silt fence, other erosion and sedimentation control measures will be implemented as needed.

9.4.6 Surface Preparation

Various surface preparation activities will be performed prior to or in conjunction with the initial site preparation activities. These surface preparation activities are specified on Technical Drawings 4, 5, and 6.

9.5 Construction Activities

9.5.1 Soil Removal and Material Handling

The proposed Removal Actions will require excavation and handling of certain existing soils within the Phase 4 floodplain properties. Specifically, existing soils within the excavation limits and depths, as depicted on Technical Drawings 7, 8, and 9, will be removed using conventional construction equipment (e.g., excavator, backhoe, and loader). The maximum depth of excavation will be approximately 3 feet below ground surface (bgs). The Contractor shall ensure that no free liquids are present within excavated materials prior to being transported/disposed at the appropriate OPCA.

As soils are excavated and prior to their transport to the appropriate OPCA, a number of intermediate on-site handling activities may be necessary. To ensure that such activities are performed in a manner that minimizes the potential for inadvertent releases to the environment, unsafe conditions for on-site and off-site personnel, and delays or complications in project completion, several on-site material handling procedures will be implemented. The specific method(s) of handling the removed soils will be based on, but not limited to, the following considerations:

- The characteristics of the excavated soils and corresponding disposition requirements;
- The locations from which the materials are removed and their proximity to the loading area(s); and
- The overall sequence and schedule of the Removal Actions.

To reduce the potential for the release of PCBs or other Appendix IX+3 constituents to the environment during removal and handling activities, the number of times that the excavated material is handled will be kept to a minimum. To accomplish this, the Remediation Contractor will conduct direct loading to trucks to the extent practical. Additional information regarding material handling is discussed below.

-
- To reduce the potential for migration of PCBs or other Appendix IX+3 constituents due to wind- and rainfall-related factors, work areas where excavation activities are yet to be completed will be protected with a cover (e.g., polyethylene sheeting) which will be anchored when the area is not under active excavation/use. In addition, if concerns regarding airborne dust are identified or suspected, water will be sprayed to keep the open excavation (or excavated soils) moist.
 - To the extent feasible and practicable, material handling and loading areas will not be established in locations that may interfere with construction operations or necessary traffic flow. In addition, material handling areas will be located so as to take into account site topography and avoid (to the extent possible) low-lying drainage areas where surface runoff is likely to accumulate.
 - Additional erosion and sedimentation control measures (e.g., hay bales and geotextile fencing) will be utilized as necessary.

Based on the specified soil removal limits identified on Technical Drawings 7, 8, and 9, the total volume of existing materials to be removed from the Phase 4 floodplain properties is approximately 3,320 in-situ cubic yards. Based on a review of the analytical results collected from within these removal limits during previous investigations, GE has determined that soils removed as part of the activities described herein will be subject to placement in either the Building 71 OPCA or the Hill 78 OPCA. Additional information regarding the transport and disposition of excavated materials is provided below in Section 9.5.2.

9.5.2 Transport and Disposition of Excavated Materials and Remediation-Derived Waste

As indicated above, all excavated materials will be consolidated in GE's OPCAs, excluding items (if any) that are prohibited for disposition at the OPCAs under the CD and SOW. Previous sampling and analysis conducted for soils at the Phase 4 floodplain properties indicate that soils at certain of the sampling locations that represent the areas where soil will be excavated either have PCB concentrations over 50 ppm and thus are regulated for disposal under TSCA, or appear to have concentrations of other constituents that would cause them to constitute characteristic hazardous waste under RCRA. These excavated soils will be transported to and consolidated at the Building 71 OPCA, which is authorized to receive TSCA- and RCRA-regulated material. Soils not regulated under TSCA and RCRA will be transported to and consolidated at the Hill 78 OPCA. Technical Drawings 7, 8, and 9 provide the limits of soils to be transported to and consolidated at the Building 71 and Hill 78 OPCAs.

The transportation of excavated materials from the Phase 4 floodplain properties to the OPCAs will utilize the primary route shown on Figure 9-1 (or, if that route cannot be used, the secondary route shown on Figure 9-1 or an alternate route proposed by GE for EPA approval). Based on review of these routes and discussion with EPA, such transport will be considered to occur “on-site” within the meaning of Paragraph 9.a of the CD, and thus will be subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on-site permitting exemption referenced in Paragraph 9.a of the CD. In these circumstances, site-specific transportation procedures have been developed for this Removal Action, as listed below.

The Remediation Contractor will be required to implement the following procedures for the transport of excavated materials from the Phase 4 floodplain properties to the appropriate OPCA:

- Employ qualified personnel trained per U.S. Department of Transportation (DOT) requirements for handling and shipping hazardous materials, with such training to include general safety, emergency response, exposure protection, accident prevention, preparation of shipping papers, and securing loads.
- Employ drivers that have a Commercial Driver’s License (CDL) with a Hazardous Materials Endorsement.
- Utilize trucks that are DOT-inspected.
- Include in its HASP, Operations Plan, and Contingency Plan, detailed provisions for responding to transportation emergencies such as spills, releases, or other incidents.
- Maintain records of the number of loads of materials sent to the OPCAs on a daily basis.
- Confirm that the materials are suitable for transport (i.e., no free liquids).

The transport of excavated materials from the Phase 4 floodplain properties to the appropriate OPCA will be conducted in accordance with the following guidelines:

- After a safety check of the truck, the truck bed will be lined with polyethylene. Excavated soil will be placed in the truck and the load will be covered.

-
- A Hazardous Materials Bill of Lading (BOL) will be prepared and signed by the truck driver. The DOT shipping description to be used on the BOL will be:

“RQ, Polychlorinated biphenyls, mixture, 9, UN 2315, PG 111, RQ”

- After another safety check of the vehicle and placarding, the truck will leave the site and proceed to the appropriate OPCA utilizing the primary route shown on Figure 9-1. If, for some reason, the primary route is not used, the secondary route shown on Figure 9-1 (or an alternate route to be proposed by GE to EPA) will be used.
- Upon arrival of the truck at the appropriate OPCA, the OPCA Contractor will document receipt of the load and the material will be off-loaded and placed by the OPCA Contractor.

The return of the trucks from the OPCA to the Phase 4 floodplain properties will not necessarily be by the same route(s) shown on Figure 9-1.

9.5.3 Backfilling of Excavations

Backfilling operations will be initiated as soon as practicable after completion and proper documentation of excavation activities (i.e., survey control). It is anticipated that the excavations will be backfilled and compacted using conventional construction equipment. Clean backfill materials will be placed in 8-inch-thick lifts in a loose state and compacted in accordance with the Technical Specifications (Appendix E) prior to additional fill being placed within the excavation. The excavation will be brought up to the predetermined subgrade elevation prior to installing the final surface layer (e.g., topsoil, seed, and mulch). These procedures may be modified, for particular properties or areas, in the Site Restoration Plan discussed in Section 9.5.5.

Backfill material will be clean, natural material, no greater than gravel in size to ensure proper settlement, permeability, and compactability. The specific fill sources to be used for this project will be identified by the Remediation Contractor. A description of the process for identifying such sources and, if necessary, submitting the analytical data for them was presented in Section 7.4.

9.5.4 Equipment Cleaning

Equipment and materials that have come into contact with existing soils at the Phase 4 floodplain properties during the construction activities will be cleaned prior to relocation to an area outside the work zone (i.e., the excavation and loading areas), prior to handling backfill materials, and prior to its departure from the Phase 4 floodplain properties. Equipment cleaning will be conducted as specified in Section 3.5 of the Site Management Plan in the POP.

9.5.5 Restoration of Disturbed Vegetation and Natural Pool

This section pertains to the restoration of vegetated areas both within and outside the soil removal limits. Technical Drawings 10, 11, and 12 (in Appendix A) depict the areas that will be subject to vegetative restoration. Prior to the initiation of remediation actions, the Remediation Contractor will be required to perform an inventory of all existing trees and shrubs (i.e., type, quantity, size, etc.) located within the limits of the remediation actions.

To address the restoration of these areas, a specific Site Restoration Plan will be developed and submitted as part of the supplemental information package. That plan will describe the procedures for placement of subbase soil and/or topsoil in the vegetated areas, followed by the placement of seed mix and mulch, to restore pre-excavation grades. The plan will also address the replanting of trees and shrubs, subject to modification based on consultation with EPA and discussions with the property owners. In addition, the plan will include an evaluation of the need for special restoration measures in the natural pool located on Parcel I6-1-106 (shown on Technical Drawings 9 and 12), which will be affected by the soil removal at that property; and if necessary, the plan will describe proposed measures for restoration of that pool area.

GE will coordinate with EPA regarding the schedule and implementation of restoration activities.

9.6 Perimeter Air Monitoring

Ambient air monitoring for PCBs and particulate matter will be performed during the remediation actions. The scope of the ambient air monitoring program is presented in Appendix G to this RD/RA Work Plan. In overview, ambient air monitoring for PCBs will include collection of ambient air samples using “high volume” samplers equipped with glass fiber filters and polyurethane foam (PUF) cartridges. The samples will be

collected, analyzed, and evaluated using the procedures specified in EPA Compendium Method TO-4A. To obtain representative data on ambient levels of PCBs around the construction site before and during construction activities, two PCB air sampling events will be performed prior to the start of construction activities and additional events will be performed at least once every 4 weeks during the course of construction. Ambient air monitoring for particulates will be performed on a continuous basis during all active construction activities using real-time particulate air monitors.

The ambient air monitoring scope of work in Appendix G discusses the locations for the air monitoring. It preliminarily identifies four potential monitoring locations (shown on attached figures). For PCB air monitoring, that scope of work notes that PCB background monitoring will be conducted at three of those stations prior to any on-site soil remediation activity, and that during soil removal activities, monitoring will be conducted at two or three stations (which will differ for the soil removal activities at the three groups of properties). It indicates further that PCB monitoring will also be conducted at one appropriate background location on Longfellow Avenue in Pittsfield, Massachusetts. For particulate monitoring, the scope of work in Appendix G states that such monitoring will be conducted at two or three on-site locations during soil remediation activities, which may vary slightly as remediation activities progress; and it references the preliminary monitoring locations shown on the attached figures as candidate locations for such monitoring. It also provides that background air monitoring for particulates will be conducted at the background station on Longfellow Avenue. The scope of work explains that the specific locations for the monitors will be selected based on the location and nature of the soil remediation activity, predominant wind direction, the location of potential receptors, the availability of power, site accessibility, and site security.

10. Post-Construction Activities

10.1 General

This section addresses the post-construction activities to be performed by GE at the Phase 4 floodplain properties. These activities include project closeout activities (including preparation and submittal of a Final Completion Report) and Post-Removal Site Control activities.

10.2 Project Closeout – Pre-Certification Inspection and Completion Report

GE proposes to carry out the project close-out activities for all the properties in Phase 4 of the 1½ Mile Floodplain RAAs together. Following the completion of remediation activities, the necessary EREs and associated documentation will be completed, executed, and recorded; and if a Conditional Solution is implemented at Parcel I7-1-5, a notification will be sent to the owner of that parcel, in accordance with the CD, regarding implementation of the Conditional Solution. Once GE has determined that the Removal Action for the Phase 4 floodplain properties is complete (excluding Post-Removal Site Control activities) and the applicable Performance Standards have been attained for all groups within Phase 4, GE will schedule and conduct a pre-certification inspection with EPA and MDEP.

After the pre-certification inspection, GE will proceed with remaining closeout activities, which will consist of development and submittal of a Final Completion Report to summarize and document the scope of the completed Removal Action activities. At a minimum, the Final Completion Report will include the following:

- A description of the Removal Action performed;
- Identification of any deviations from the design submittals approved by EPA;
- A listing of Removal Action quantities, including soil volumes removed;
- Results of quality assurance/quality control (QA/QC) testing performed during the Removal Action;

-
- Survey data to document the current grade and final surface contours;
 - Copies of Record Drawings developed by the Contractor to document the as-built conditions;
 - Representative project photographs;
 - Documentation regarding the disposition of materials excavated in conjunction with the construction activities;
 - Information on the recorded ERE; and
 - A Post-Removal Site Control Plan and schedule (consistent with Section 10.3 below).

10.3 Post-Removal Site Control Activities

Post-construction inspection and maintenance (I/M) activities will be performed at the Phase 4 floodplain properties, as required by Technical Attachment J to the SOW, at the frequencies and duration proposed below. Those I/M activities are described below.

10.3.1 Periodic Inspections

GE will initiate post-construction inspections of the restored surfaces at the Phase 4 floodplain properties following completion of the construction activities. Such inspections will be performed for areas that were backfilled and restored.

For backfilled/restored areas, the first inspection will be performed approximately one month after completion of construction activities. Thereafter, these areas will be inspected every 6 months for a period of 2 years (subject to subsequent EPA approval of a different frequency). At a minimum, these inspections will include visual observations of the following: (a) erosion controls to verify their continued effectiveness until such time vegetation is sufficiently established; (b) any areas where excessive settlement has occurred relative to the surrounding areas; (c) any drainage or growth problems due to possible over-compaction of the backfill materials; and (d) other conditions that could jeopardize the completed remediation.

Inspections are anticipated to occur in May and October of each year to ensure that the vegetation is growing as anticipated and is providing the desired degree of erosion control.

10.3.2 Maintenance/Repair

In connection with the periodic inspections, GE will address any conditions that need maintenance or repair. Examples of maintenance/repair activities that may be identified and conducted as a result of the periodic inspections include, but are not limited to, placement of additional topsoil in areas of erosion or settlement and repair or replacement of any components of the backfilled/restored areas exhibiting deficiencies or potential problems. If needed, additional planting or seeding will be performed to replace dead or dying vegetation.

Any such conditions noted as a result of periodic inspections will be addressed as soon as practicable. The nature of the associated maintenance/repair will be documented in the subsequent inspection report.

10.3.3 Inspection Reporting

Following each inspection described in Section 10.3.1, an inspection report will be prepared and submitted to EPA. Each such report will document I/M activities performed since submittal of the previous inspection report. As required by Attachment J to the SOW, these reports will include the following information (as relevant):

- Description of the type and frequency of inspection and/or monitoring activities conducted;
- Description of any significant modifications to the inspection and/or monitoring program made since submittal of the preceding monitoring report;
- Description of any conditions or problems noted during the inspection and/or monitoring period which are affecting or may affect the completed remediation;
- Description of any corrective measures taken;
- Results of sampling analyses and screening (if any) conducted as part of the inspection and/or monitoring program (if any); and

-
- Description of any measures that may need to be performed to correct any conditions affecting the completed remediation.

10.4 Additional Inspection Activities

In addition to the inspections described in Section 10.3 as part of Post-Removal Site Control activities, GE will conduct the inspections required by the CD (Paragraph 57.o) of the City-owned property for which an ERE will have been recorded (Parcel I7-1-101). Further, if a Conditional Solution has been implemented at Parcel I7-1-5, GE will conduct the inspections required by the CD (Paragraphs 36 and 38 and Appendix Q) of such a parcel. The details of these inspection activities and associated reporting will be presented in the Final Completion Report.

11. Schedule

As described in Section 8, following receipt of EPA approval of this Work Plan, GE will select a Remediation Contractor on a schedule to be agreed upon by GE and EPA. GE proposes that, within 30 days of selection of a Remediation Contractor, GE will submit a supplemental information package to EPA as a follow-up to this RD/RA Work Plan. The supplemental information package is anticipated to include the following:

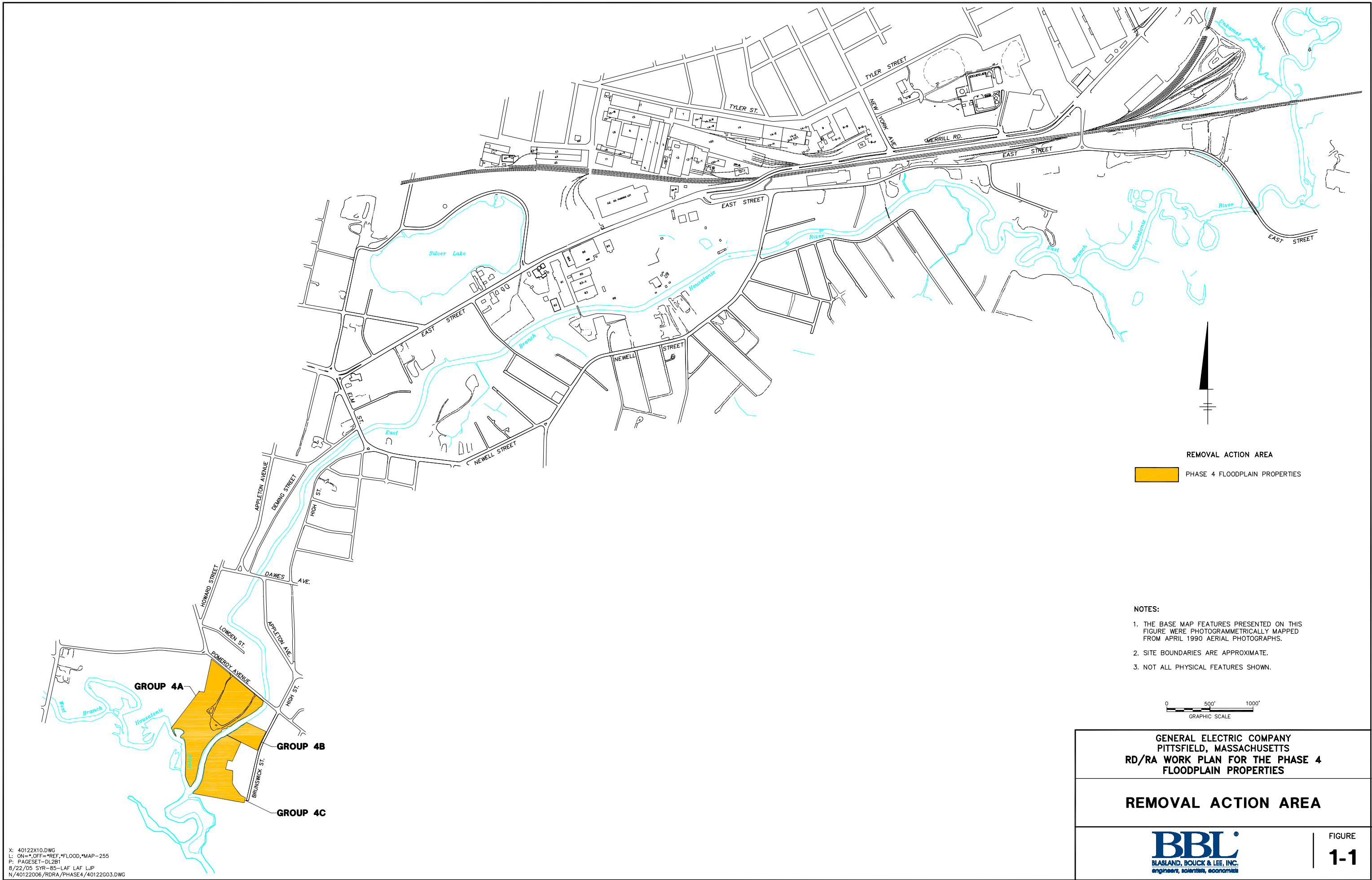
- Identification of and contact information for the selected Remediation Contractor;
- Copies of the Remediation Contractor's pre-mobilization submittals (i.e., Operations Plan, HASP, and Contingency Plan);
- Identification of backfill sources and locations;
- Analytical data for samples collected from the backfill sources (unless the backfill sources have already been approved based on previously submitted analytical data); and
- Site Restoration Plan.

Following EPA approval of this RD/RA Work Plan and the supplemental information package, site preparation activities will be initiated. The specific schedule for the implementation and completion of the Removal Actions at this RAA will depend on several factors, including the timing of EPA approval of this RD/RA Work Plan and the supplemental information package and receipt of the necessary access permission from non-GE property owners to conduct the proposed remediation actions at their properties. GE currently anticipates that remediation activities at these properties will be completed during the 2006 construction season. Additional details regarding overall project duration, including an estimate of the duration of the entire project in working weeks, will be provided in the Remediation Contractor's Work Schedule – which is a required component of the Contingency Plan submittal (Section 9.3) – to be provided to EPA as part of the forthcoming supplemental information package. With respect to access, if GE is unable to obtain access permission from particular property owners after using “best efforts” (as defined in the CD) to do so, it will so advise EPA and MDEP and seek their assistance in obtaining such access pursuant to Paragraph 60.f(i) of the CD. In addition, if issues relating to access may cause a delay in the completion of the remediation, GE will so advise EPA.

Once GE has determined that the Removal Action for the Phase 4 floodplain properties is complete (excluding Post-Removal Site Control activities) and the applicable Performance Standards have been attained for all groups within Phase 4 (including recordation of all necessary EREs), GE will schedule and conduct a pre-

certification inspection with EPA and MDEP, as described in Section 10.2. Within 30 days thereafter, or at such other time as is proposed by GE and approved by EPA, GE will submit a Final Completion Report on the Removal Action for Phase 4 of the 1½ Mile Floodplain RAAs. That report will represent completion of the CD-required remediation activities at these properties. Periodic inspection reports will continue to be provided to EPA as outlined in Sections 10.3 and 10.4.

Figures



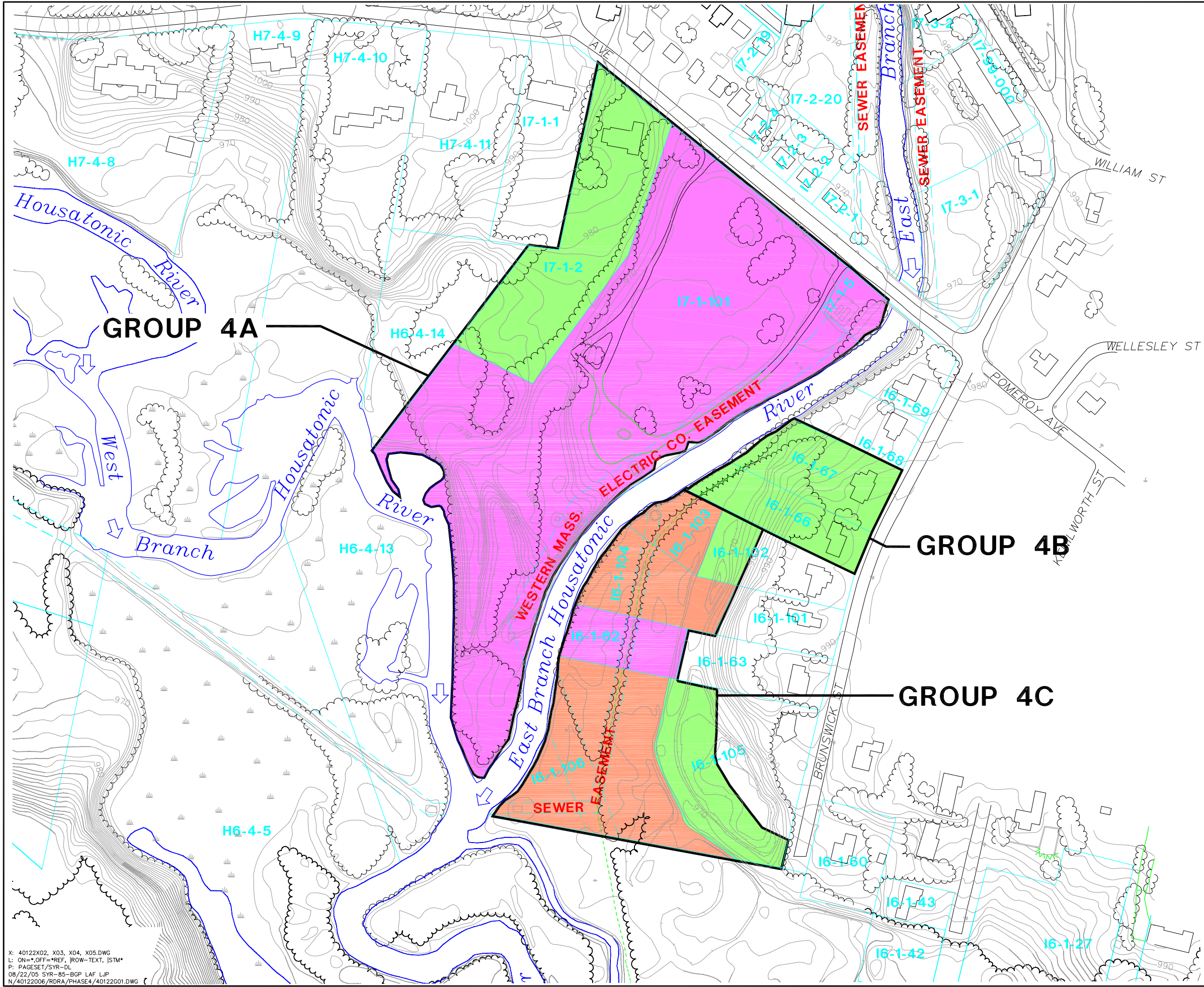
X: 40122X10.DWG
L: ON=*,OFF=*,REF=*,FLOOD,MAP=255
P: PAGESET-DL281
8/22/05 SYR-85-LAF LAF LJP
N/40122006/RDRA/PHASE4/40122G03.DWG


GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4
FLOODPLAIN PROPERTIES

REMOVAL ACTION AREA

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
1-1

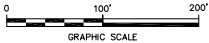




LEGEND:

- PAVED ROADWAY
- UNPAVED ROADWAY OR TRAIL
- VEGETATION
- INDEX ELEVATION CONTOUR
- PROPERTY BOUNDARY
- PROPERTY ID
- RESIDENTIAL PROPERTY – ACTUAL/POTENTIAL LAWN AREA (AS DEFINED IN SOW)
- NON-GE-OWNED RECREATIONAL PROPERTY – NON-BANK AREA
- GE-OWNED RECREATIONAL PROPERTY – NON-BANK AREA

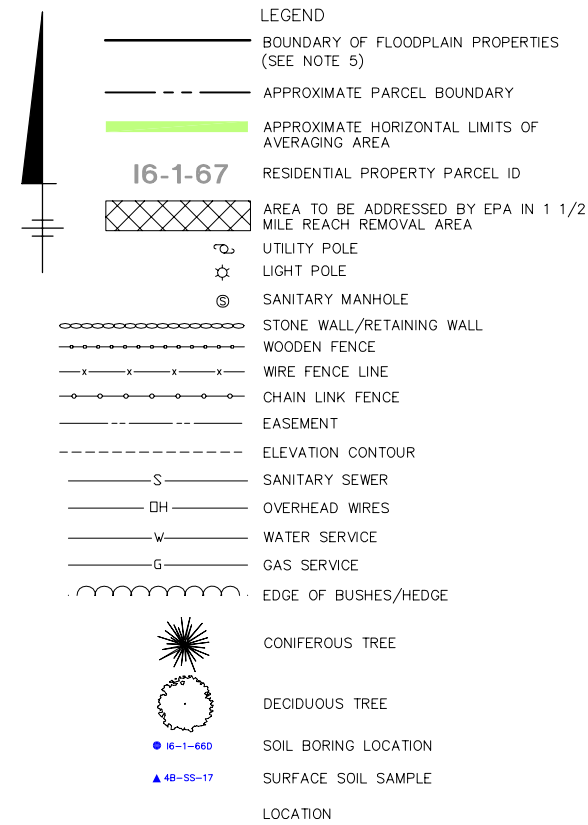
- NOTES:
1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
 2. PARCEL IDENTIFICATION AND BOUNDARIES OBTAINED FROM CITY OF PITTSFIELD'S TAX ASSESSOR'S OFFICE AND IS CURRENT THROUGH SEPTEMBER 5, 1997.



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4
FLOODPLAIN PROPERTIES

SITE PLAN





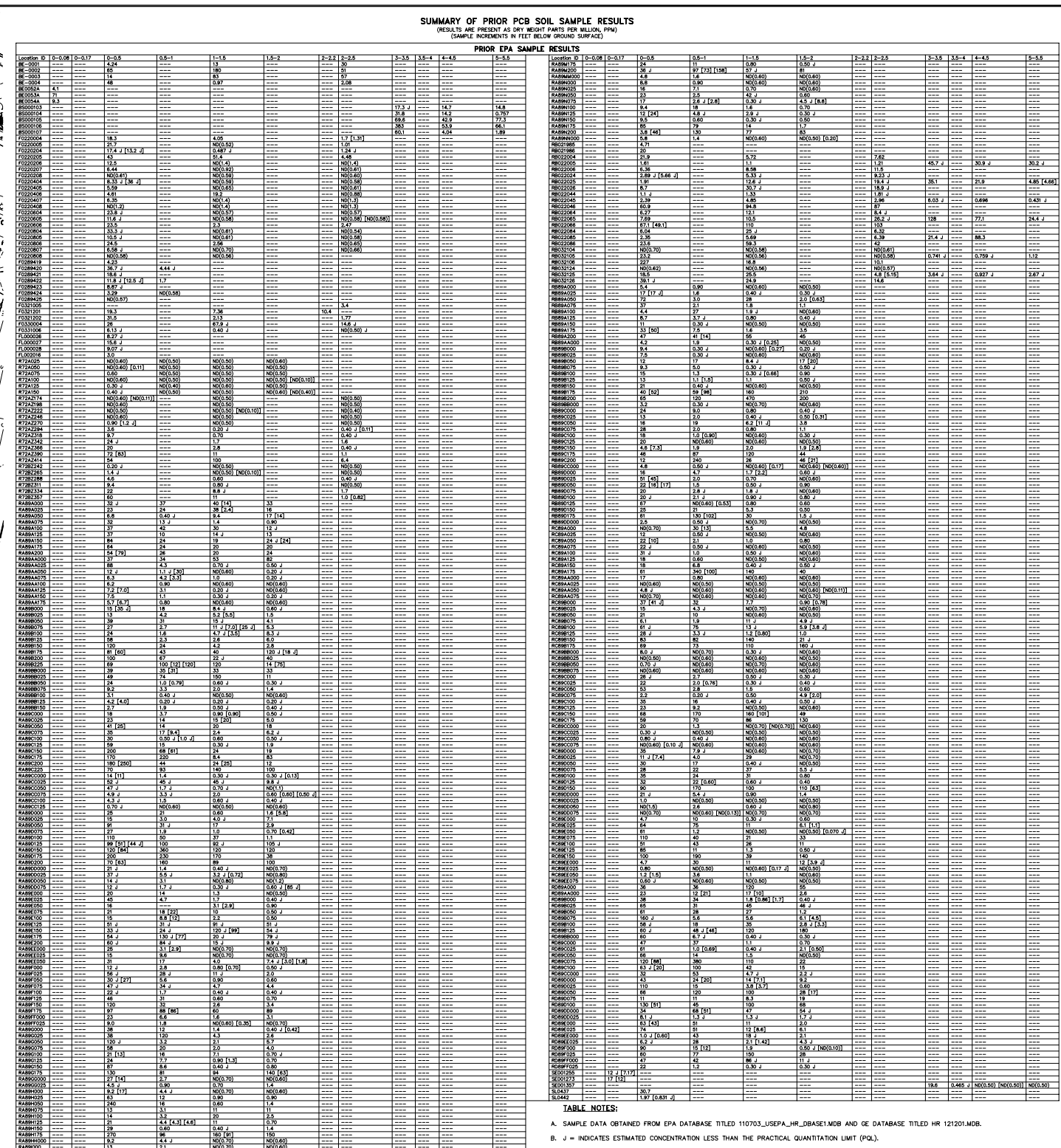


FIGURE
1-5

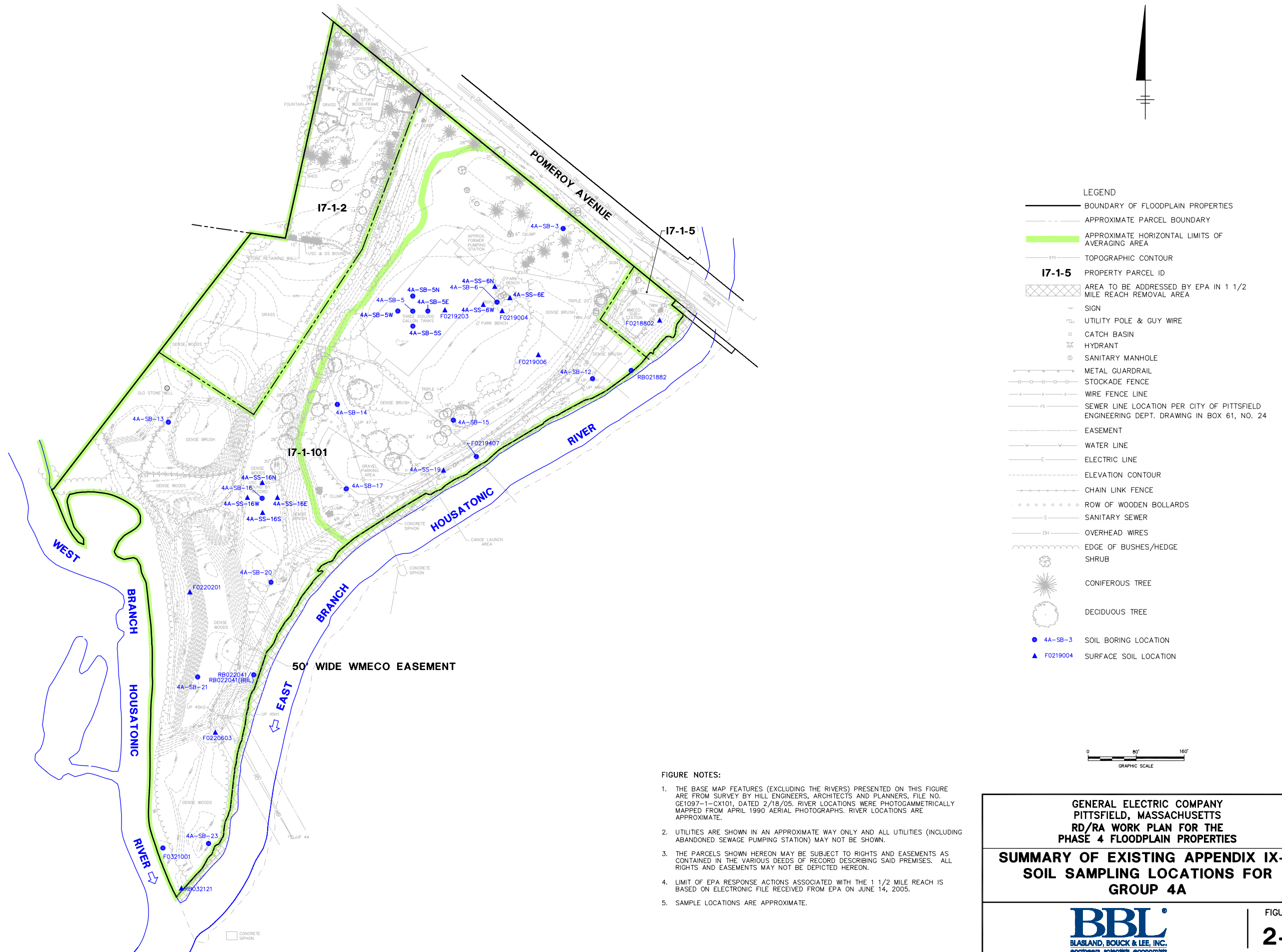
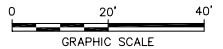




FIGURE NOTES:

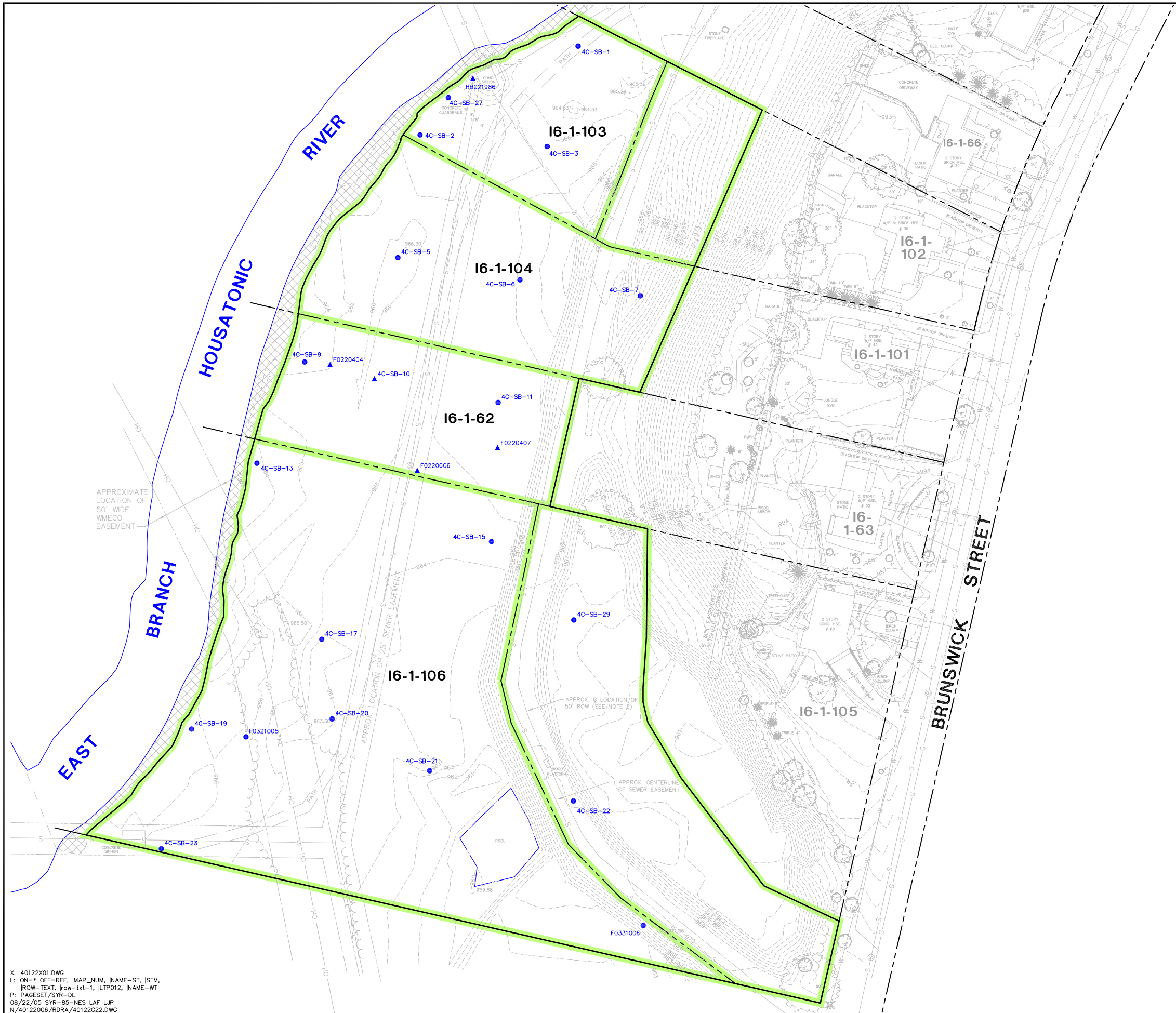
1. THE BASE MAP FEATURES (EXCLUDING THE RIVERS) PRESENTED ON THIS FIGURE ARE FROM SURVEY BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, FILE NO. GE1100-001, DATED 6/7/05. RIVER LOCATIONS WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS. RIVER LOCATIONS ARE APPROXIMATE.
2. UTILITIES ARE SHOWN IN AN APPROXIMATED WAY ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
3. THE PARCELS SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND EASEMENTS AS CONTAINED IN THE VARIOUS DEEDS OF RECORD DESCRIBING SAID PREMISES. ALL RIGHTS AND EASEMENTS MAY NOT BE DEPICTED HEREON.
4. LIMIT OF EPA RESPONSE ACTIONS ASSOCIATED WITH THE 1 1/2 MILE REACH IS BASED ON ELECTRONIC FILE RECEIVED FROM EPA ON JUNE 14, 2005.
5. SAMPLE LOCATIONS ARE APPROXIMATE.



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4
FLOODPLAIN PROPERTIES

SUMMARY OF EXISTING APPENDIX
IX+3 SOIL SAMPLING LOCATIONS
FOR GROUP 4B





LEGEND

BOUNDARY OF FLOODPLAIN PROPERTIES

APPROXIMATE PARCEL BOUNDARY

APPROXIMATE HORIZONTAL LIMITS OF AVERAGING AREA

16-1-63 RESIDENTIAL PROPERTY PARCEL ID

16-1-62 NON-RESIDENTIAL PROPERTY PARCEL ID

AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA

UTILITY POLE

LIGHT POLE

HYDRANT

SANITARY MANHOLE

STONE WALL/RETAINING WALL

WOODEN FENCE

WIRE FENCE LINE

CHAIN LINK FENCE

EASEMENT

ELEVATION CONTOUR

SANITARY SEWER

OVERHEAD WIRES

WATER SERVICE

GAS SERVICE

EDGE OF BUSHES/HEDGE

SHRUB

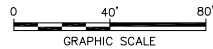
CONIFEROUS TREE

DECIDUOUS TREE

4C-SB-15 SOIL BORING LOCATION

F0220606 SURFACE SOIL SAMPLE LOCATION

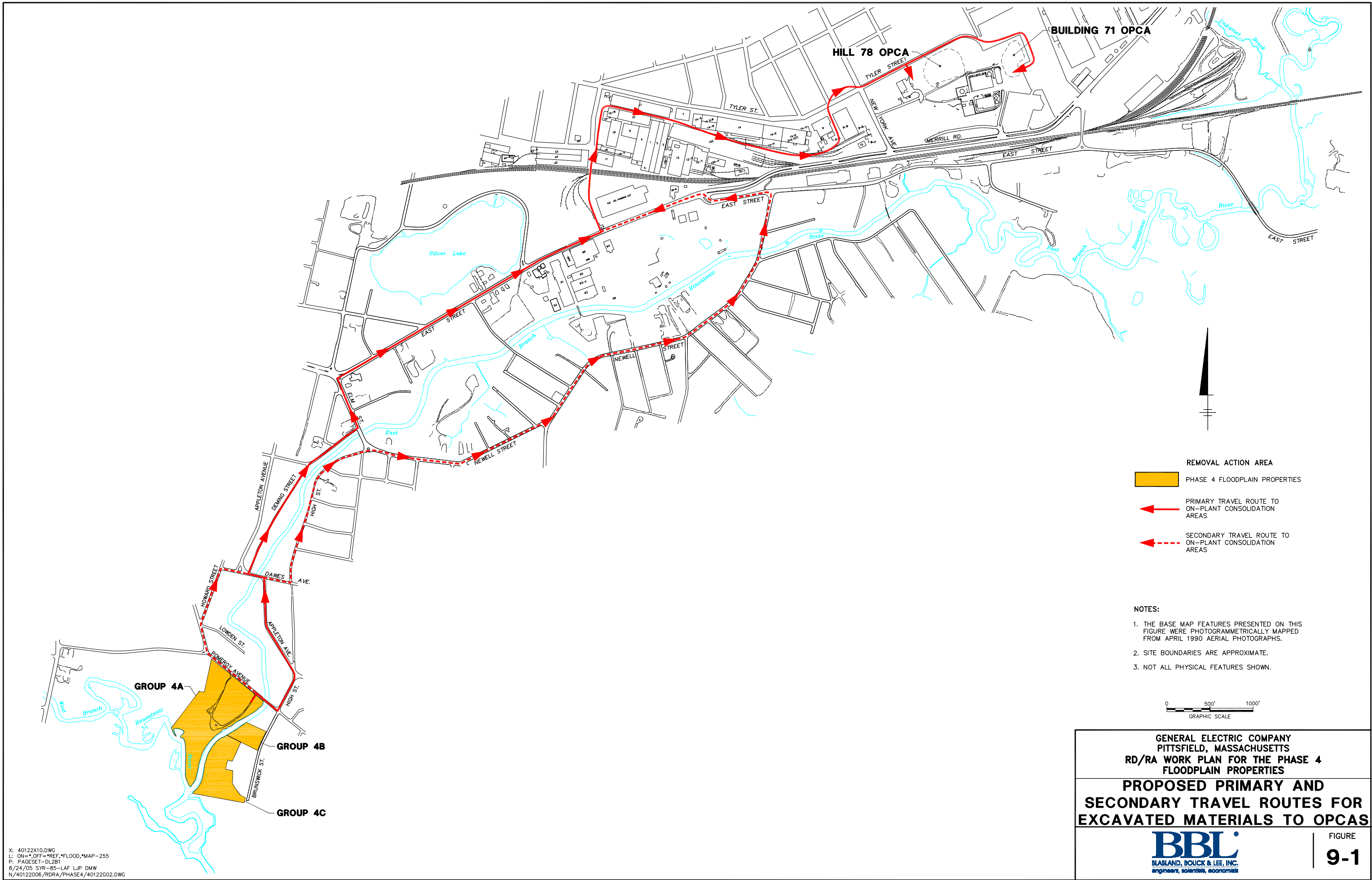
- FIGURE NOTES:
1. THE BASE MAP FEATURES (EXCLUDING THE RIVERS) PRESENTED ON THIS FIGURE ARE FROM SURVEY BY HILL, ENGINEERS, ARCHITECTS AND PLANNERS, FILE NO. GE1100-001, DATED 6/7/05. RIVER LOCATIONS WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS. RIVER LOCATIONS ARE APPROXIMATE.
 2. UTILITIES ARE SHOWN IN AN APPROXIMATED WAY ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
 3. THE PARCELS SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND EASEMENTS AS CONTAINED IN THE VARIOUS DEEDS OF RECORDS DESCRIBING SAID PREMISES. ALL RIGHTS AND EASEMENTS MAY NOT BE DEPICTED HEREON.
 4. LIMIT OF EPA RESPONSE ACTIONS ASSOCIATED WITH THE 1 1/2 MILE REACH IS BASED ON ELECTRONIC FILE RECEIVED FROM EPA ON JUNE 14, 2005.
 5. SAMPLE LOCATIONS ARE APPROXIMATE.



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4
FLOODPLAIN PROPERTIES

SUMMARY OF EXISTING APPENDIX
IX+3 SOIL SAMPLING LOCATIONS
FOR GROUP 4C





Appendices

Appendix A

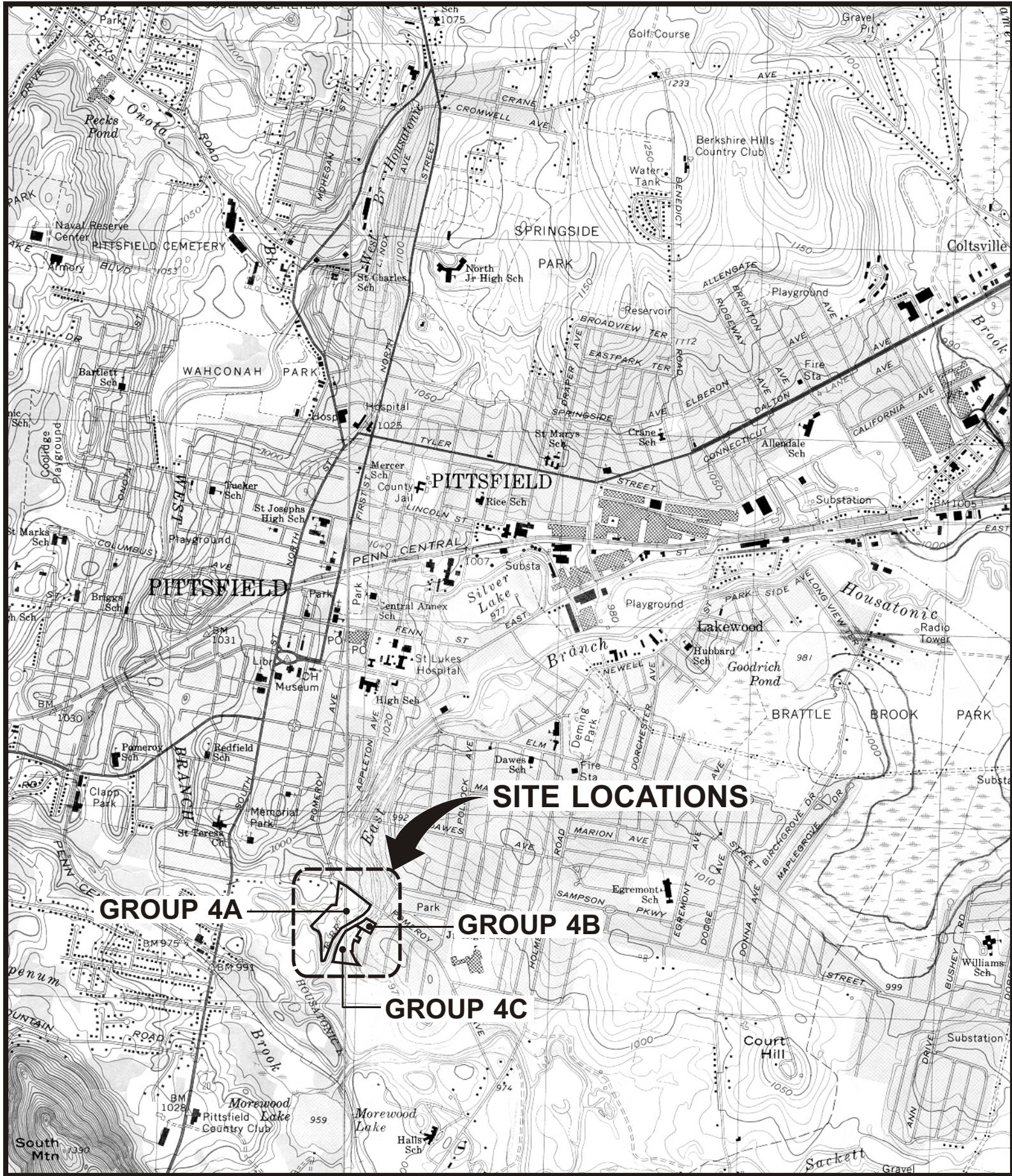
Technical Drawings

TECHNICAL DRAWINGS

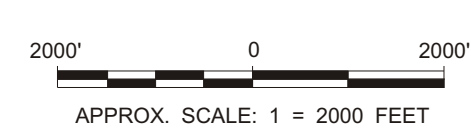
PHASE 4

FLOODPLAIN PROPERTIES

REMOVAL ACTION AREA (RAA)



REFERENCE: Base Map Source: USGS 7.5 Min. Topo. Quads., Pittsfield West, Mass-New York and Pittsfield East, Mass., 1973.



LOCATION MAP



AUGUST 2005

PREPARED FOR:



General Electric Company
Pittsfield, Massachusetts

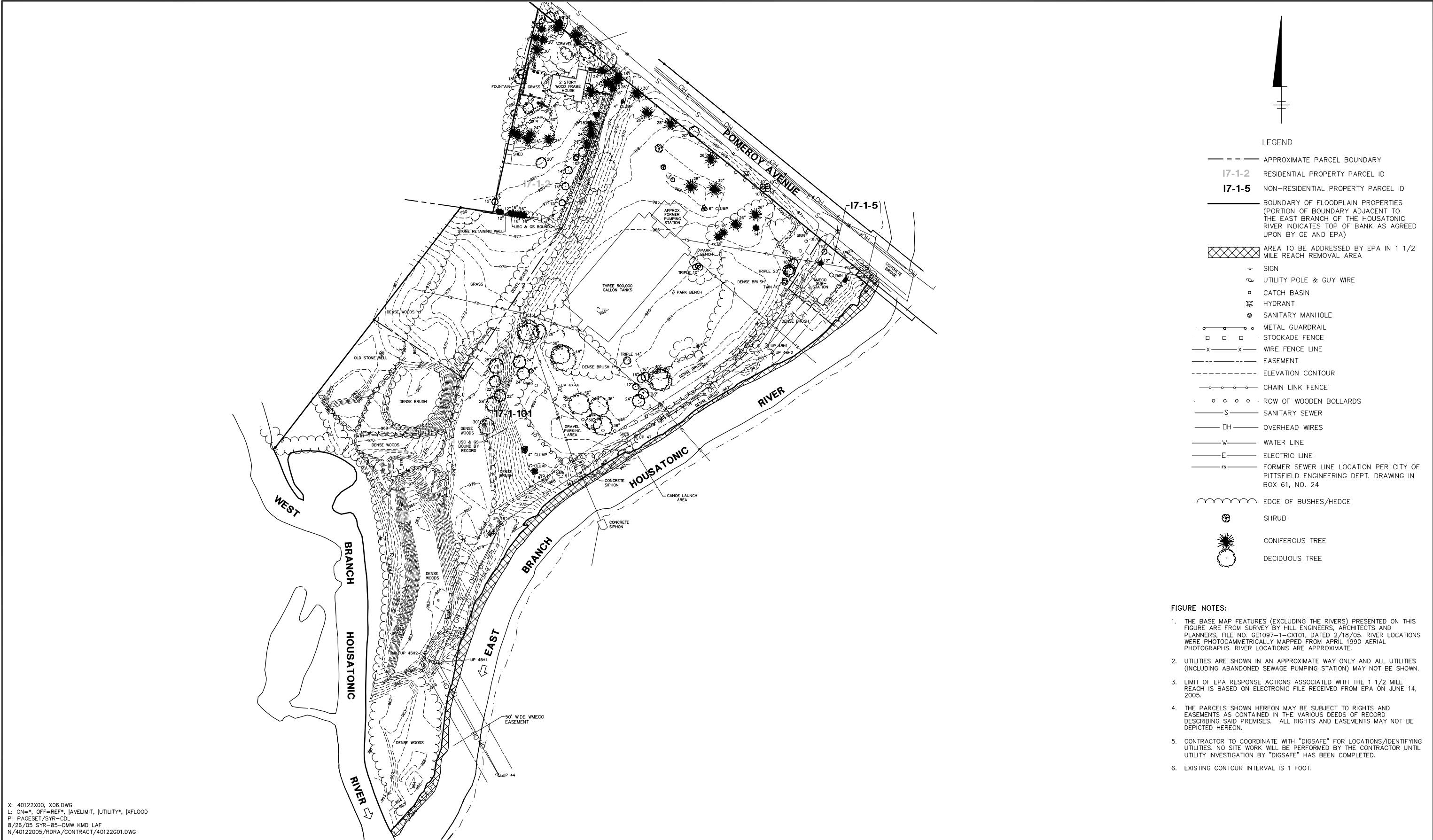
PREPARED BY:

BBL[®]
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

INDEX TO DRAWINGS

COVER SHEET

1. EXISTING SITE PLAN FOR GROUP 4A
2. EXISTING SITE PLAN FOR GROUP 4B
3. EXISTING SITE PLAN FOR GROUP 4C
4. SITE PREPARATION PLAN FOR GROUP 4A
5. SITE PREPARATION PLAN FOR GROUP 4B
6. SITE PREPARATION PLAN FOR GROUP 4C
7. EXCAVATION LIMITS FOR GROUP 4A
8. EXCAVATION LIMITS FOR GROUP 4B
9. EXCAVATION LIMITS FOR GROUP 4C
10. SITE RESTORATION PLAN FOR GROUP 4A
11. SITE RESTORATION PLAN FOR GROUP 4B
12. SITE RESTORATION PLAN FOR GROUP 4C
13. GENERAL NOTES AND DETAILS



X: 40122X00, X06.DWG
L: ON=*, OFF=REF*, JAVELIMIT, JUTILITY*, JXFLOOD
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122005/RDRA/CONTRACT/40122G01.DWG

Graphic Scale

80'

0

80'

160'

1"=80'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.

USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init
NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			

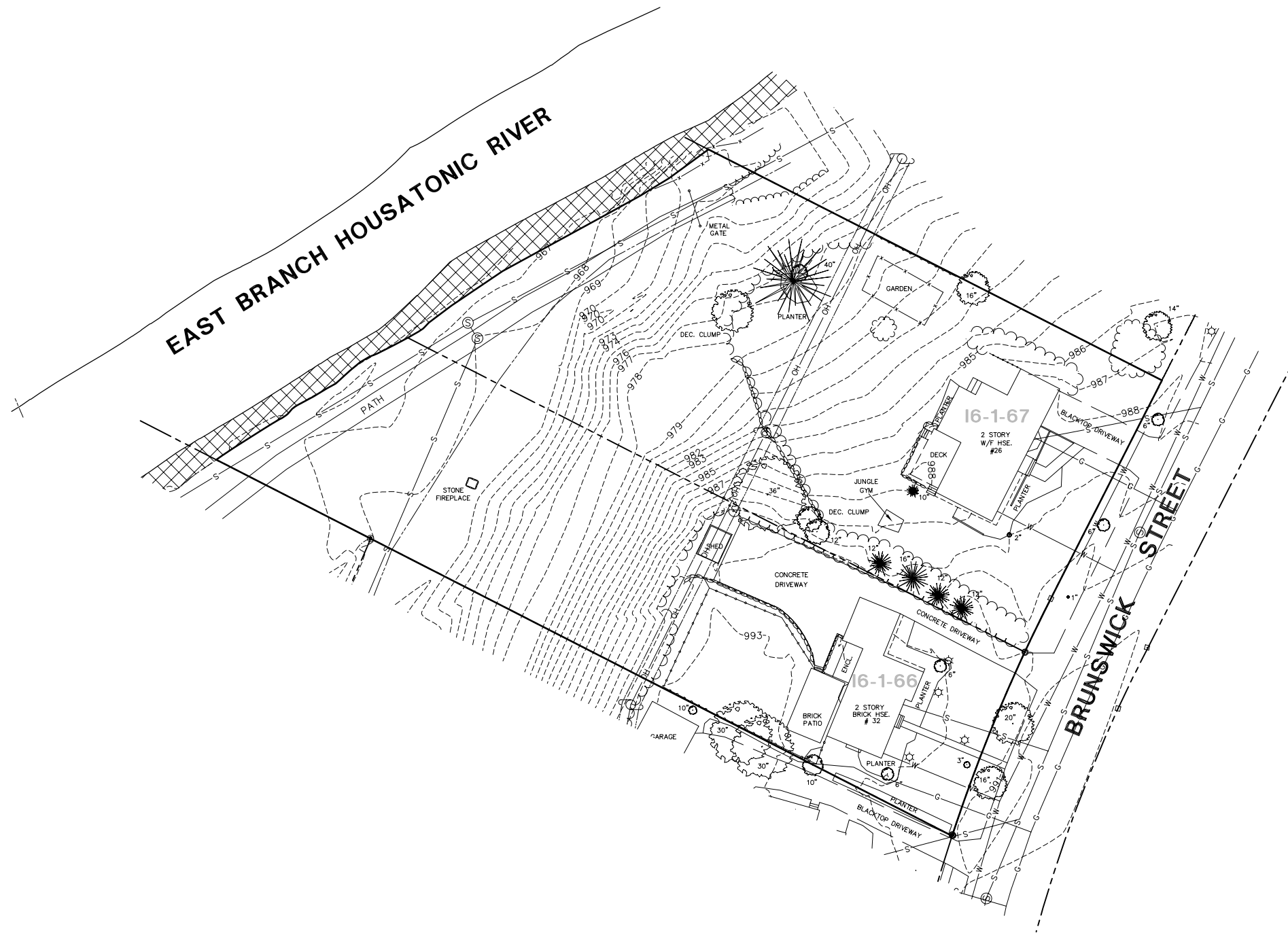
Professional Engineer's Name		
Professional Engineer's No.		
State	Date Signed	
Project Mgr.	Designed by	Drawn by
ACC		DMW



GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES
EXISTING SITE PLAN FOR GROUP 4A

TECHNICAL DRAWINGS

BBL Project No. 401.22
Date AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120



LEGEND

--- APPROXIMATE PARCEL BOUNDARY

16-1-66 RESIDENTIAL PROPERTY PARCEL ID

--- BOUNDARY OF FLOODPLAIN PROPERTIES
(PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)

AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA

UTILITY POLE

LIGHT POLE

SANITARY MANHOLE

STONE WALL/RETAINING WALL

WOODEN FENCE

WIRE FENCE LINE

CHAIN LINK FENCE

EASEMENT

ELEVATION CONTOUR

SANITARY SEWER

OVERHEAD WIRES

WATER SERVICE

GAS SERVICE

EDGE OF BUSHES/HEDGE

CONIFEROUS TREE

DECIDUOUS TREE

- FIGURE NOTES:
1. THE BASE MAP FEATURES (EXCLUDING THE RIVERS) PRESENTED ON THIS FIGURE ARE FROM SURVEY BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, FILE NO. GE1100-001, DATED 6/7/05. RIVER LOCATIONS WERE PHOTOGAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS. RIVER LOCATIONS ARE APPROXIMATE.
 2. UTILITIES ARE SHOWN IN AN APPROXIMATED WAY ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
 3. THE PARCELS SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND EASEMENTS AS CONTAINED IN THE VARIOUS DEEDS OF RECORD DESCRIBING SAID PREMISES. ALL RIGHTS AND EASEMENTS MAY NOT BE DEPICTED HEREON.
 4. LIMIT OF EPA RESPONSE ACTIONS ASSOCIATED WITH THE 1 1/2 MILE REACH IS BASED ON ELECTRONIC FILE RECEIVED FROM EPA ON JUNE 14, 2005.
 5. CONTRACTOR TO COORDINATE WITH "DIGSAFE" FOR LOCATIONS/IDENTIFYING UTILITIES. NO SITE WORK WILL BE PERFORMED BY THE CONTRACTOR UNTIL UTILITY INVESTIGATION BY "DIGSAFE" HAS BEEN COMPLETED.
 6. EXISTING CONTOUR INTERVAL IS 1 FOOT.

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c*, [4-c*, [A]VELIMIT*, [X]FLOOD*, [4C
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G01.DWG

<p>Graphic Scale</p> <p>1"=30'</p> <p>30' 0 30' 60'</p>					Professional Engineer's Name			GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS		BBL Project No. 401.22		2	
					Professional Engineer's No.			RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES		Date AUGUST 2005			
					State			EXISTING SITE PLAN FOR GROUP 4B		Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120			
					Date Signed								
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.				NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW				Project Mgr. ACC		Designed by		Drawn by DMW	

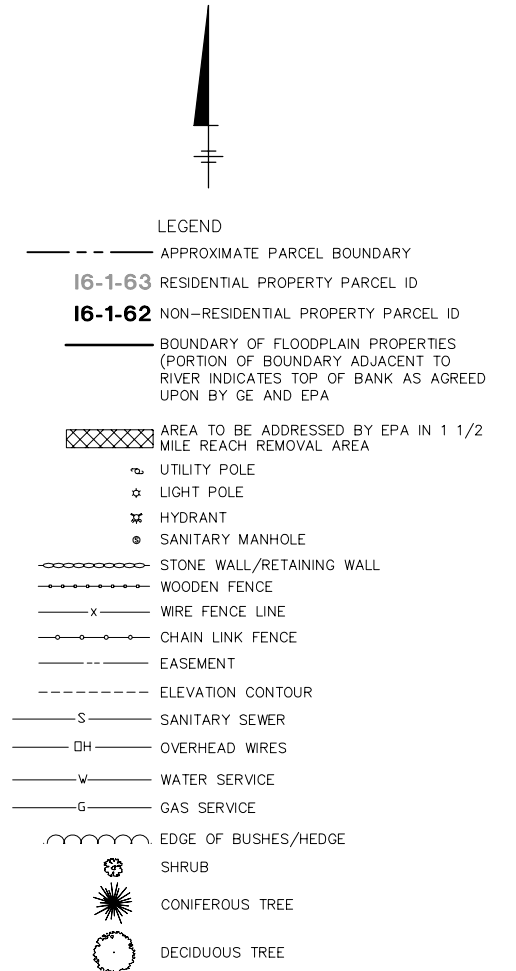
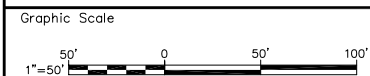


FIGURE NOTES:

1. THE BASE MAP FEATURES (EXCLUDING THE RIVERS) PRESENTED ON THIS FIGURE ARE FROM SURVEY BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, FILE NO. GE1100-001, DATED 6/7/05. RIVER LOCATIONS WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS. RIVER LOCATIONS ARE APPROXIMATE.
2. UTILITIES ARE SHOWN IN AN APPROXIMATED WAY ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
3. THE PARCELS SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND EASEMENTS AS CONTAINED IN THE VARIOUS DEEDS OF RECORD DESCRIBING SAID PREMISES. ALL RIGHTS AND EASEMENTS MAY NOT BE DEPICTED HEREON.
4. LIMIT OF EPA RESPONSE ACTIONS ASSOCIATED WITH THE 1 1/2 MILE REACH IS BASED ON ELECTRONIC FILE RECEIVED FROM EPA ON JUNE 14, 2005.
5. CONTRACTOR TO COORDINATE WITH "DIGSAFE" FOR LOCATIONS/IDENTIFYING UTILITIES. NO SITE WORK WILL BE PERFORMED BY THE CONTRACTOR UNTIL UTILITY INVESTIGATION BY "DIGSAFE" HAS BEEN COMPLETED.
6. EXISTING CONTOUR INTERVAL IS 1 FOOT.

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c*, [4B-RIVER*, [4-c*, [A]VELIMIT*, [X]FLOOD, [G]ROUP-4B
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G02.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name	
Professional Engineer's No.	
State	Date Signed
Project Mgr.	Designed by
ACC	DMW

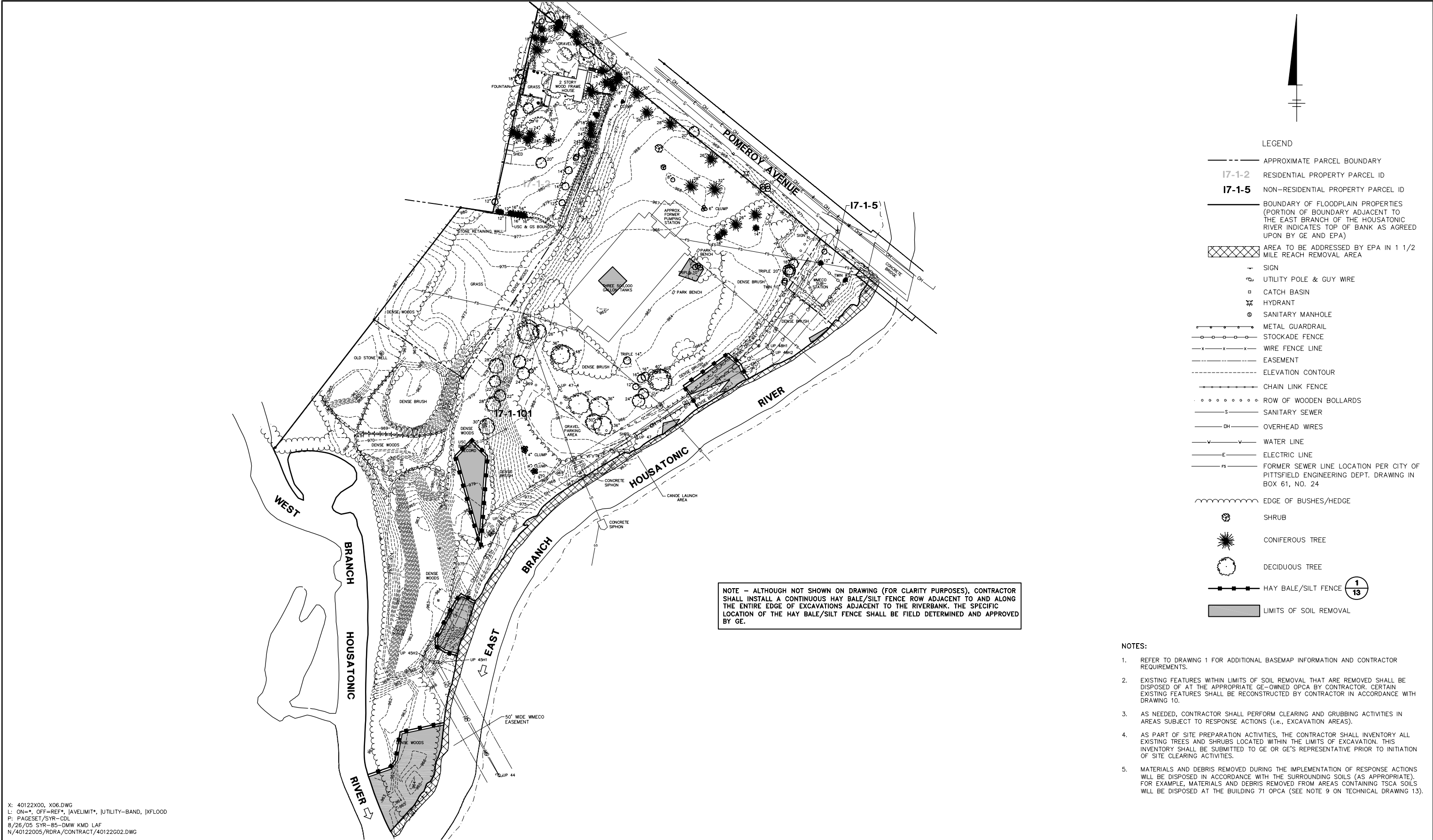
BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

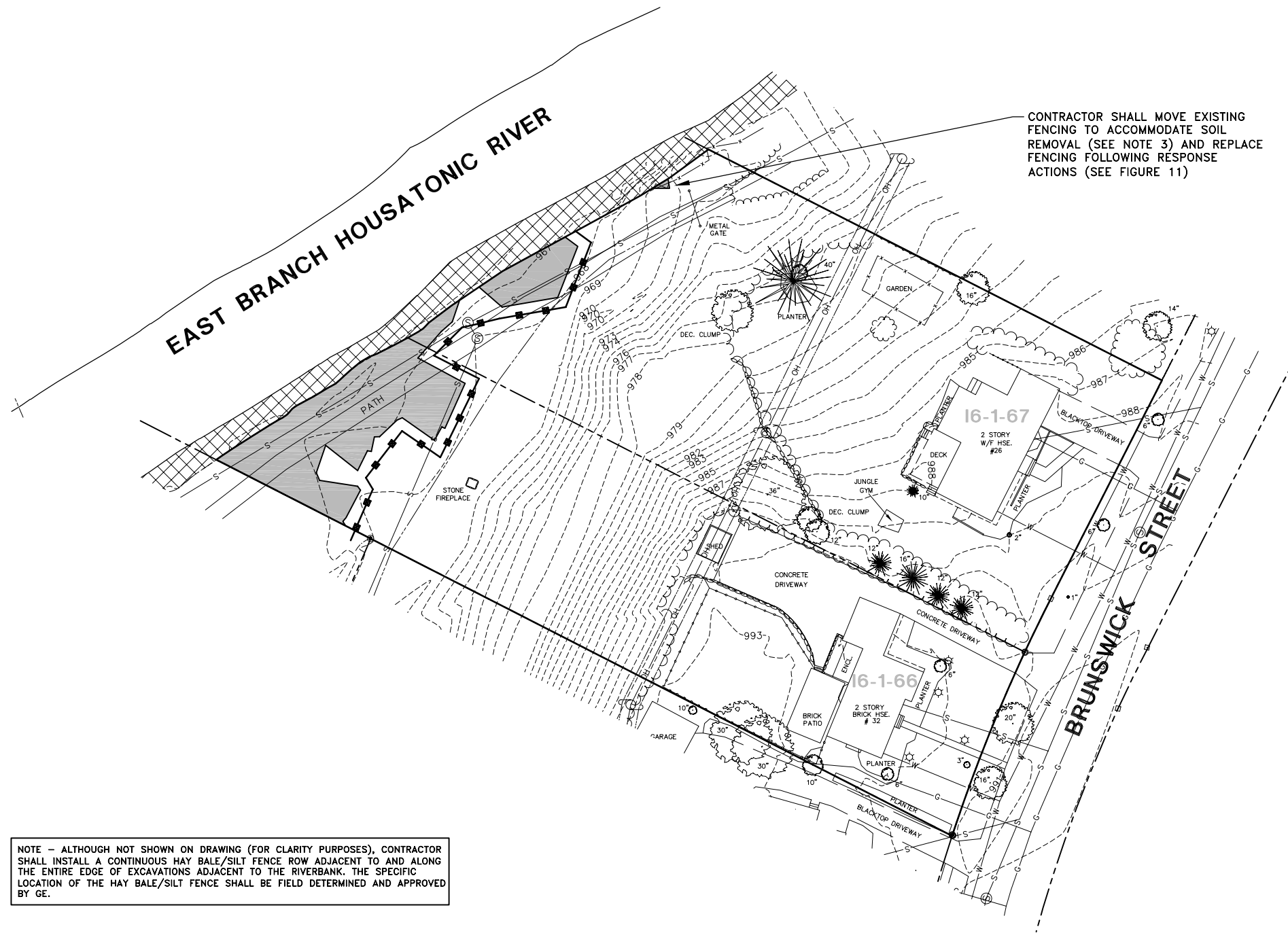
GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES

EXISTING SITE PLAN FOR GROUP 4C

TECHNICAL DRAWINGS

BBL Project No. 401.22
Date AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120





NOTE — ALTHOUGH NOT SHOWN ON DRAWING (FOR CLARITY PURPOSES), CONTRACTOR SHALL INSTALL A CONTINUOUS HAY BALE/SILT FENCE ROW ADJACENT TO AND ALONG THE ENTIRE EDGE OF EXCAVATIONS ADJACENT TO THE RIVERBANK. THE SPECIFIC LOCATION OF THE HAY BALE/SILT FENCE SHALL BE FIELD DETERMINED AND APPROVED BY GE.

LEGEND

--- APPROXIMATE PARCEL BOUNDARY

I6-1-66 RESIDENTIAL PROPERTY PARCEL ID

--- BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)

AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA

UTILITY POLE

LIGHT POLE

SANITARY MANHOLE

STONE WALL/RETAINING WALL

WOODEN FENCE

WIRE FENCE LINE

CHAIN LINK FENCE

EASEMENT

ELEVATION CONTOUR

SANITARY SEWER

OVERHEAD WIRES

WATER SERVICE

GAS SERVICE

EDGE OF BUSHES/HEDGE

CONIFEROUS TREE

DECIDUOUS TREE

HAY BALE/SILT FENCE 1
13

FENCE REMOVAL/REPLACEMENT (SEE NOTE 3)

LIMITS OF SOIL REMOVAL

- NOTES:
- REFER TO DRAWING 2 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
 - EXISTING FEATURES WITHIN LIMITS OF SOIL REMOVAL THAT ARE REMOVED SHALL BE DISPOSED OF AT THE APPROPRIATE GE-OWNED OPCA BY CONTRACTOR. CERTAIN EXISTING FEATURES SHALL BE RECONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH DRAWING 11.
 - UNLESS OTHERWISE NOTED, CONTRACTOR SHALL REMOVE FOR DISPOSAL AND REPLACE WITH NEW, ALL FENCE POSTS WITHIN LIMITS OF SOIL REMOVAL. THE FENCE MAY BE REUSED IF APPROVED BY GE OR GE'S REPRESENTATIVE. ALL PORTIONS OF THE FENCE DEEMED UNUSABLE BY GE OR GE'S REPRESENTATIVE SHALL BE DISPOSED AND NEW SECTIONS OF FENCE SHALL BE INSTALLED BY CONTRACTOR.
 - AS NEEDED, CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING ACTIVITIES IN AREAS SUBJECT TO RESPONSE ACTIONS (i.e., EXCAVATION AREAS).
 - AS PART OF SITE PREPARATION ACTIVITIES, THE CONTRACTOR SHALL INVENTORY ALL EXISTING TREES AND SHRUBS LOCATED WITHIN THE LIMITS OF EXCAVATION. THIS INVENTORY SHALL BE SUBMITTED TO GE OR GE'S REPRESENTATIVE PRIOR TO INITIATION OF SITE CLEARING ACTIVITIES.
 - MATERIALS AND DEBRIS REMOVED DURING THE IMPLEMENTATION OF RESPONSE ACTIONS WILL BE DISPOSED IN ACCORDANCE WITH THE SURROUNDING SOILS (AS APPROPRIATE). FOR EXAMPLE, MATERIALS AND DEBRIS REMOVED FROM AREAS CONTAINING TSCA SOILS WILL BE DISPOSED AT THE BUILDING 71 OPCA (SEE NOTE 9 ON TECHNICAL DRAWING 13).

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, |3-c, |4-C*, |AELIMIT*, |XFL00D, |GROUP-4C
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW LAF LJP
N/40122006/RDRA/CONTRACT/40122G03.DWG

<p>Graphic Scale</p> <p>1"=30'</p> <p>30' 0 30' 60'</p>				Professional Engineer's Name				GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS			BBL Project No. 401.22			5		
				Professional Engineer's No.				RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES			Date AUGUST 2005					
				State Date Signed				SITE PREPARATION PLAN FOR GROUP 4B			Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120					
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.				No. Date Revisions Init			Project Mgr. Designed by Drawn by									
				NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			ACC			DMW			TECHNICAL DRAWINGS			

NOTE - ALTHOUGH NOT SHOWN ON DRAWING (FOR CLARITY PURPOSES), CONTRACTOR SHALL INSTALL A CONTINUOUS HAY BALE/SILT FENCE ROW ADJACENT TO AND ALONG THE ENTIRE EDGE OF EXCAVATIONS ADJACENT TO THE RIVERBANK. THE SPECIFIC LOCATION OF THE HAY BALE/SILT FENCE SHALL BE FIELD DETERMINED AND APPROVED BY GE.

CONTRACTOR SHALL REMOVE CONCRETE GUARDRAILS TO ACCOMMODATE SOIL REMOVAL AND REPLACE GUARDRAILS FOLLOWING RESPONSE ACTIONS (SEE FIGURE 12)

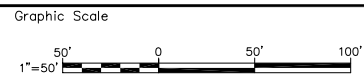


- LEGEND
- APPROXIMATE PARCEL BOUNDARY
 - 16-1-63** RESIDENTIAL PROPERTY PARCEL ID
 - 16-1-62** NON-RESIDENTIAL PROPERTY PARCEL ID
 - BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
 - [Cross-hatch] AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
 - UTILITY POLE
 - ☆ LIGHT POLE
 - ⛑ HYDRANT
 - ⊙ SANITARY MANHOLE
 - STONE WALL/RETAINING WALL
 - WOODEN FENCE
 - x- WIRE FENCE LINE
 - CHAIN LINK FENCE
 - EASEMENT
 - ELEVATION CONTOUR
 - S- SANITARY SEWER
 - OH- OVERHEAD WIRES
 - W- WATER SERVICE
 - G- GAS SERVICE
 - ~ EDGE OF BUSHES/HEDGE
 - ⊙ SHRUB
 - ⊙ CONIFEROUS TREE
 - ⊙ DECIDUOUS TREE
 - HAY BALE/SILT FENCE
 - [Shaded] LIMITS OF SOIL REMOVAL

NOTES:

- REFER TO DRAWING 3 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
- EXISTING FEATURES WITHIN LIMITS OF SOIL REMOVAL THAT ARE REMOVED SHALL BE DISPOSED OF AT THE APPROPRIATE GE-OWNED OPCA BY CONTRACTOR. CERTAIN EXISTING FEATURES SHALL BE RECONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH DRAWING 12.
- AS NEEDED, CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING ACTIVITIES IN AREAS SUBJECT TO RESPONSE ACTIONS (i.e., EXCAVATION AREAS).
- AS PART OF SITE PREPARATION ACTIVITIES, THE CONTRACTOR SHALL INVENTORY ALL EXISTING TREES AND SHRUBS LOCATED WITHIN THE LIMITS OF EXCAVATION. THIS INVENTORY SHALL BE SUBMITTED TO GE OR GE'S REPRESENTATIVE PRIOR TO INITIATION OF SITE CLEARING ACTIVITIES.
- MATERIALS AND DEBRIS REMOVED DURING THE IMPLEMENTATION OF RESPONSE ACTIONS WILL BE DISPOSED IN ACCORDANCE WITH THE SURROUNDING SOILS (AS APPROPRIATE). FOR EXAMPLE, MATERIALS AND DEBRIS REMOVED FROM AREAS CONTAINING TSCA SOILS WILL BE DISPOSED AT THE BUILDING 71 OPCA (SEE NOTE 9 ON TECHNICAL DRAWING 13).

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c, [4B-RIVER*, [4-c*, [AELIMIT*, [XFLOOD, [GROUP-4B
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G06.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name	
Professional Engineer's No.	
State	Date Signed
Project Mgr.	Designed by
ACC	DMW

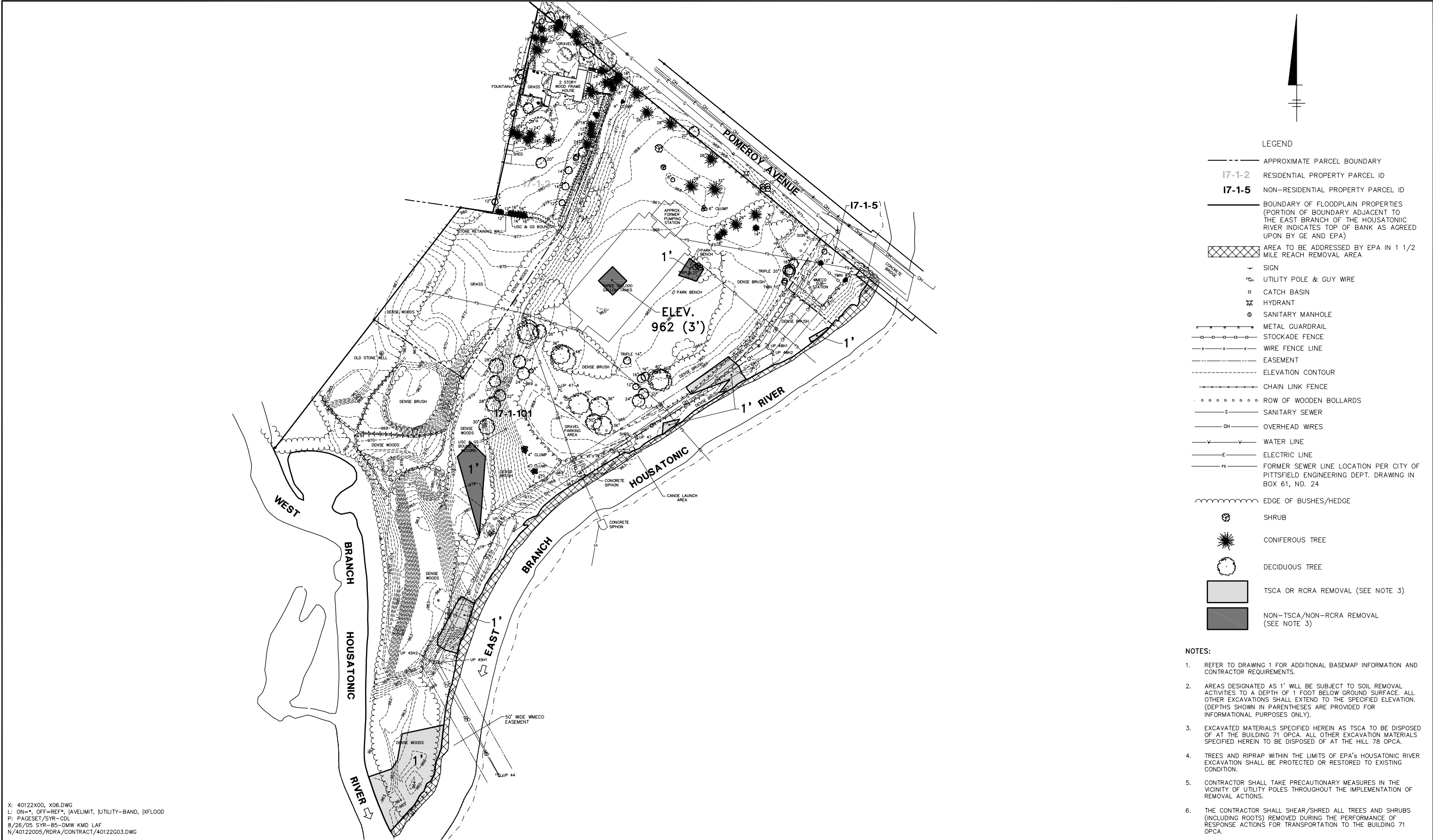
BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES

SITE PREPARATION PLAN FOR GROUP 4C

TECHNICAL DRAWINGS

BBL Project No. 401.22	6
Date AUGUST 2005	
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120	



X: 40122X00, X06.DWG
L: ON=*, OFF=REF*, [A]VELIMIT, [U]TILITY-BAND, [X]FLOOD
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122005/RDRA/CONTRACT/40122G03.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name		
Professional Engineer's No.		
State	Date Signed	
Project Mgr.	Designed by	Drawn by
ACC		DMW



GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES
EXCAVATION LIMITS FOR GROUP 4A

TECHNICAL DRAWINGS



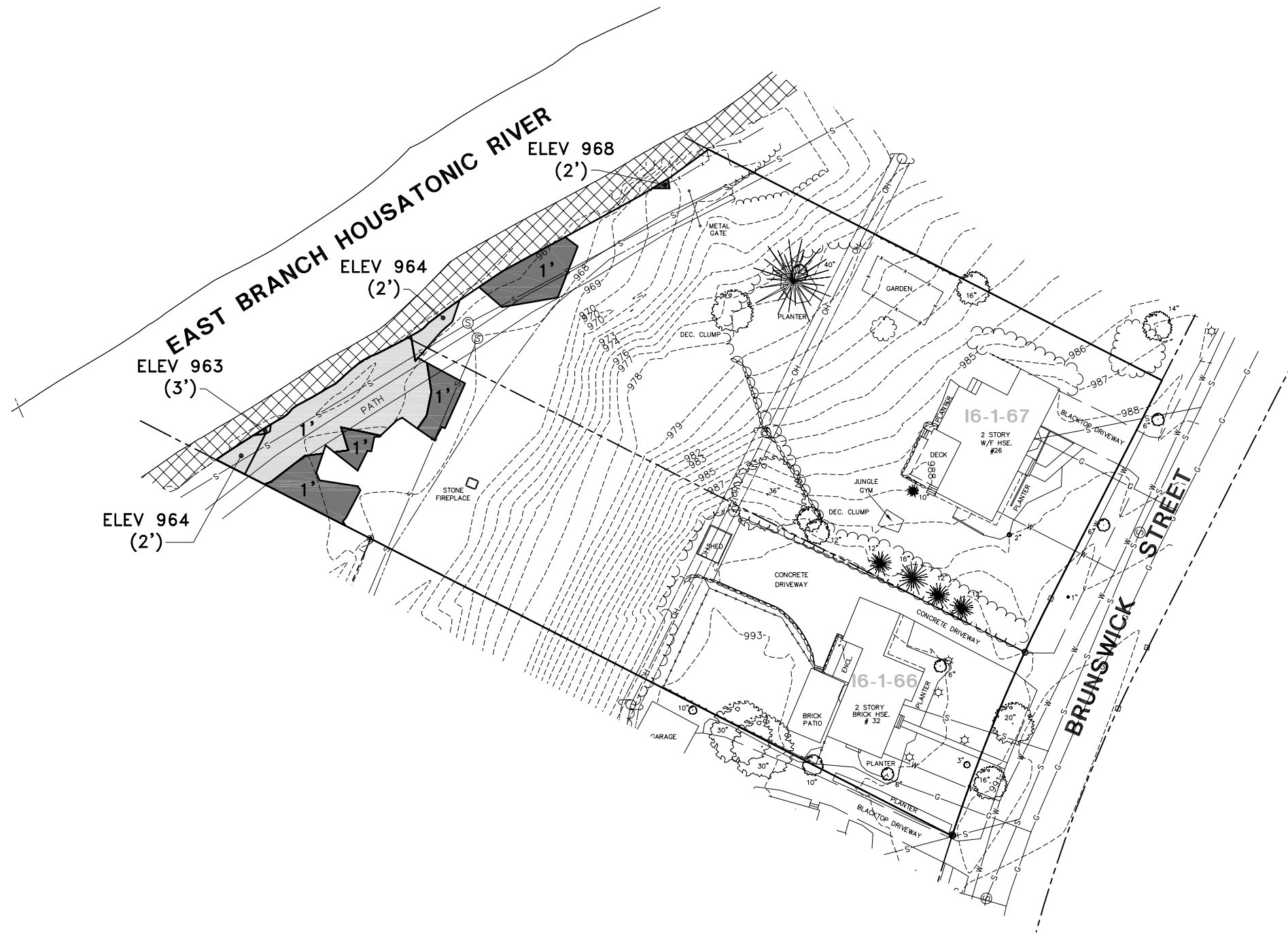
LEGEND

- APPROXIMATE PARCEL BOUNDARY
- 17-1-2 RESIDENTIAL PROPERTY PARCEL ID
- 17-1-5 NON-RESIDENTIAL PROPERTY PARCEL ID
- BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO THE EAST BRANCH OF THE HOUSATONIC RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
- ▨ AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
- ✚ SIGN
- ⊕ UTILITY POLE & GUY WIRE
- CATCH BASIN
- ⛶ HYDRANT
- ⊙ SANITARY MANHOLE
- METAL GUARDRAIL
- STOCKADE FENCE
- WIRE FENCE LINE
- EASEMENT
- ELEVATION CONTOUR
- CHAIN LINK FENCE
- ROW OF WOODEN BOLLARDS
- S SANITARY SEWER
- OH OVERHEAD WIRES
- W WATER LINE
- E ELECTRIC LINE
- FS FORMER SEWER LINE LOCATION PER CITY OF PITTSFIELD ENGINEERING DEPT. DRAWING IN BOX 61, NO. 24
- ~ EDGE OF BUSHES/HEDGE
- ⊙ SHRUB
- ⊙ CONIFEROUS TREE
- ⊙ DECIDUOUS TREE
- ▨ TSCA OR RCRA REMOVAL (SEE NOTE 3)
- ▨ NON-TSCA/NON-RCRA REMOVAL (SEE NOTE 3)

NOTES:

- REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
- AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE. ALL OTHER EXCAVATIONS SHALL EXTEND TO THE SPECIFIED ELEVATION. (DEPTHS SHOWN IN PARENTHESES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY).
- EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.
- TREES AND RIPRAP WITHIN THE LIMITS OF EPA'S HOUSATONIC RIVER EXCAVATION SHALL BE PROTECTED OR RESTORED TO EXISTING CONDITION.
- CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES IN THE VICINITY OF UTILITY POLES THROUGHOUT THE IMPLEMENTATION OF REMOVAL ACTIONS.
- THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.

BBL Project No. 401.22
Date AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120



- LEGEND
- APPROXIMATE PARCEL BOUNDARY
 - 16-1-66** RESIDENTIAL PROPERTY PARCEL ID
 - BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
 - [Cross-hatched box] AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
 - [Circle with cross] UTILITY POLE
 - [Star] LIGHT POLE
 - [Circle with S] SANITARY MANHOLE
 - [Dashed line] STONE WALL/RETAINING WALL
 - [Dashed line] WOODEN FENCE
 - [Line with X] WIRE FENCE LINE
 - [Line with dots] CHAIN LINK FENCE
 - [Dashed line] EASEMENT
 - [Dashed line] ELEVATION CONTOUR
 - [Line with S] SANITARY SEWER
 - [Line with DH] OVERHEAD WIRES
 - [Line with W] WATER SERVICE
 - [Line with G] GAS SERVICE
 - [Wavy line] EDGE OF BUSHES/HEDGE
 - [Star symbol] CONIFEROUS TREE
 - [Circle symbol] DECIDUOUS TREE
 - [Light gray box] TSCA OR RCRA REMOVAL (SEE NOTE 3)
 - [Dark gray box] NON-TSCA/NON-RCRA REMOVAL (SEE NOTE 3)

- NOTES:
- REFER TO DRAWING 2 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
 - AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE.
 - EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.
 - TREES AND RIPRAP WITHIN THE LIMITS OF EPA'S HOUSATONIC RIVER EXCAVATION SHALL BE PROTECTED OR RESTORED TO EXISTING CONDITION.
 - CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES IN THE VICINITY OF UTILITY POLES THROUGHOUT THE IMPLEMENTATION OF REMOVAL ACTIONS.
 - THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c*, [4-c*, [A]VELIMIT*, [F]LOOD, [G]ROUP-4C
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G04.DWG

Graphic Scale <div>30' 0 30' 60'</div> <div>1"=30'</div>						Professional Engineer's Name		<div><div>BBL®</div><div>BLASLAND, BOUCK & LEE, INC.</div><div>engineers, scientists, economists</div></div>		GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES				BBL Project No. 401.22	
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.						Professional Engineer's No.				Date AUGUST 2005					
NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW						State				Date Signed		<div>EXCAVATION LIMITS FOR GROUP 4B</div> <div>TECHNICAL DRAWINGS</div>			
						Project Mgr. ACC				Designed by					
		No.		Date		Revisions		Init		Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120					

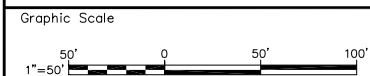


LEGEND

- APPROXIMATE PARCEL BOUNDARY
- 16-1-63** RESIDENTIAL PROPERTY PARCEL ID
- 16-1-62** NON-RESIDENTIAL PROPERTY PARCEL ID
- BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
- [Hatched Box] AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
- UTILITY POLE
- ☆ LIGHT POLE
- ⋈ HYDRANT
- ⊙ SANITARY MANHOLE
- STONE WALL/RETAINING WALL
- WOODEN FENCE
- x- WIRE FENCE LINE
- CHAIN LINK FENCE
- EASEMENT
- ELEVATION CONTOUR
- S- SANITARY SEWER
- OH- OVERHEAD WIRES
- W- WATER SERVICE
- G- GAS SERVICE
- EDGE OF BUSHES/HEDGE
- ⊙ SHRUB
- ⊙ CONIFEROUS TREE
- ⊙ DECIDUOUS TREE
- [Light Gray Box] TSCA OR RCRA REMOVAL (SEE NOTE 3)
- [Dark Gray Box] NON-TSCA/NON-RCRA REMOVAL (SEE NOTE 3)

- NOTES:**
- REFER TO DRAWING 3 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
 - AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE. ALL OTHER EXCAVATIONS SHALL EXTEND TO THE SPECIFIED ELEVATION. (DEPTHS SHOWN IN PARENTHESES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY).
 - EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.
 - TREES AND RIPRAP WITHIN THE LIMITS OF EPA'S HOUSATONIC RIVER EXCAVATION SHALL BE PROTECTED OR RESTORED TO EXISTING CONDITION.
 - CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES IN THE VICINITY OF UTILITY POLES THROUGHOUT THE IMPLEMENTATION OF REMOVAL ACTIONS.
 - THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c, [4B-RIVER*, [4-c*, [AELIMIT*, [FLOOD, [GROUP-4B
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G07.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name	
Professional Engineer's No.	
State	Date Signed
Project Mgr.	Designed by
ACC	DMW

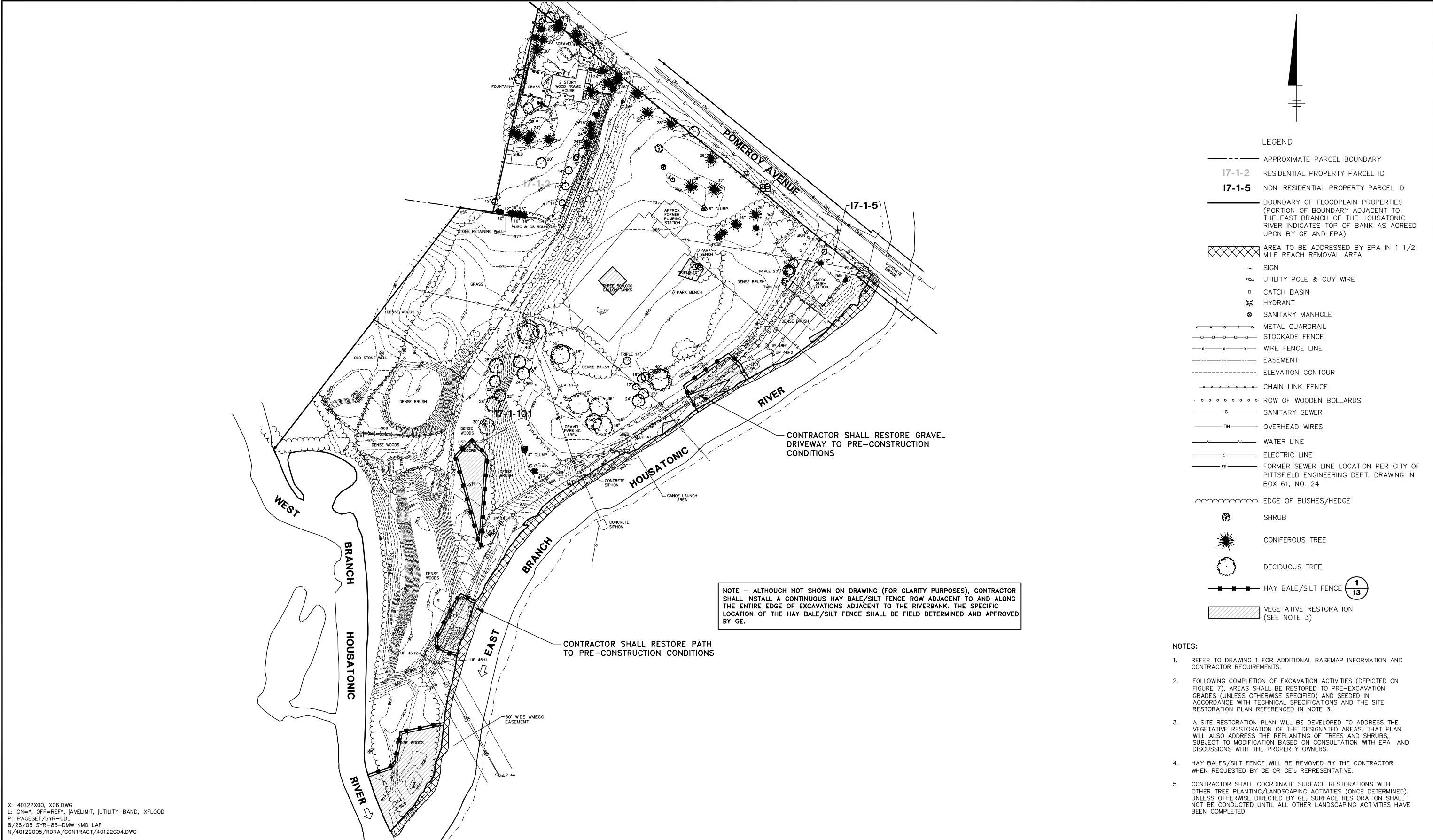
BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES

EXCAVATION LIMITS FOR GROUP 4C

TECHNICAL DRAWINGS

BBL Project No. 401.22	9
Date AUGUST 2005	
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120	



X: 40122X00, X06.DWG
L: ON=*, OFF=REF*, JAVELIMIT, JUTILITY-BAND, JXFLOOD
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122005/RDRA/CONTRACT/40122G04.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

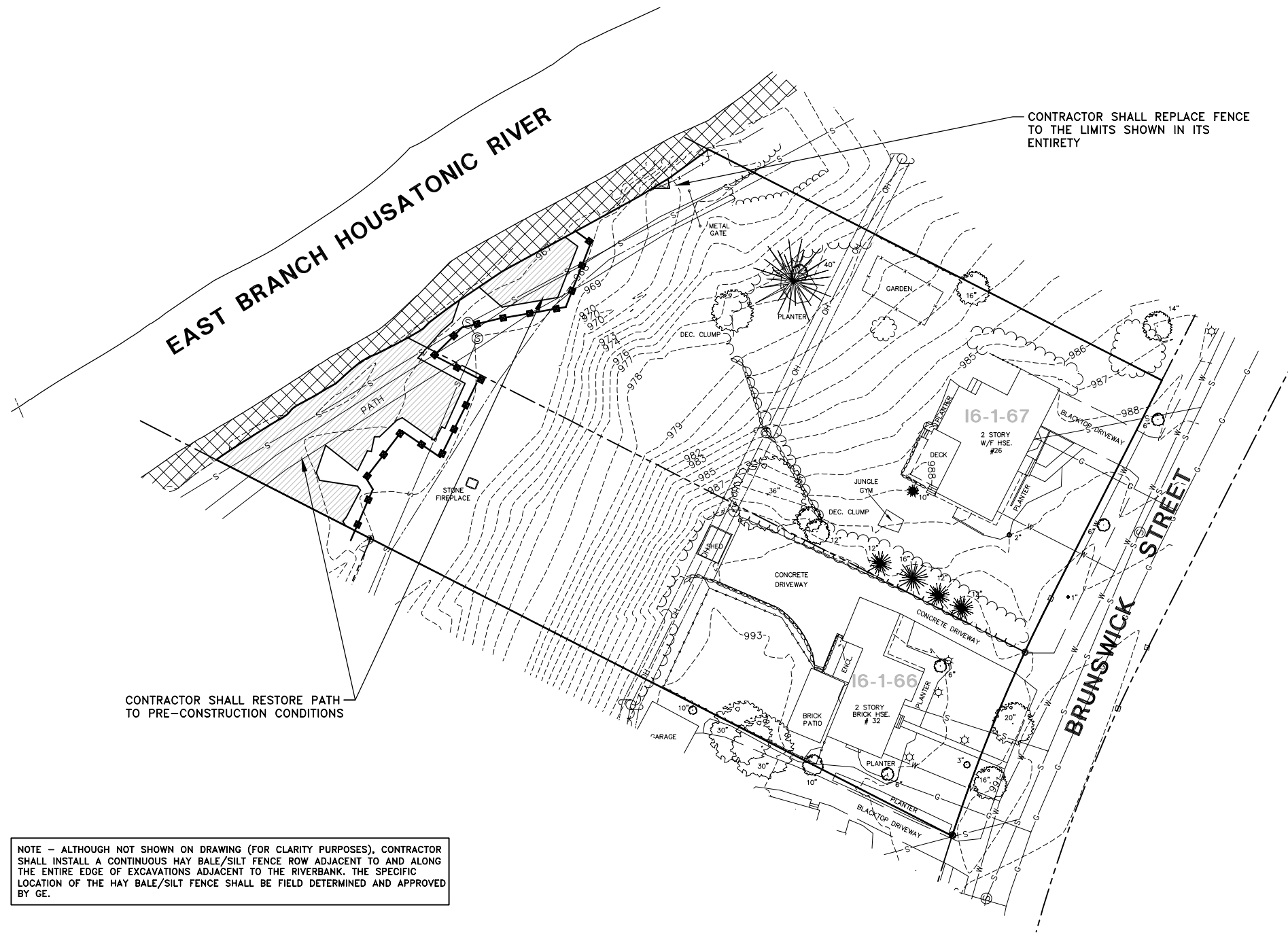
Professional Engineer's Name	
Professional Engineer's No.	
State	Date Signed
Project Mgr.	Designed by
ACC	DMW



GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES
SITE RESTORATION PLAN FOR GROUP 4A

TECHNICAL DRAWINGS

BBL Project No. 401.22
Date AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120



- LEGEND
- APPROXIMATE PARCEL BOUNDARY
 - 16-1-66 RESIDENTIAL PROPERTY PARCEL ID
 - BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
 - [Cross-hatched] AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
 - ⊕ UTILITY POLE
 - ⊙ LIGHT POLE
 - ⊙ SANITARY MANHOLE
 - STONE WALL/RETAINING WALL
 - WOODEN FENCE
 - x-x- WIRE FENCE LINE
 - o-o- CHAIN LINK FENCE
 - EASEMENT
 - ELEVATION CONTOUR
 - S- SANITARY SEWER
 - DH- OVERHEAD WIRES
 - W- WATER SERVICE
 - G- GAS SERVICE
 - EDGE OF BUSHES/HEDGE
 - [Star symbol] CONIFEROUS TREE
 - [Circle symbol] DECIDUOUS TREE
 - HAY BALE/SILT FENCE (SEE NOTE 3)
 - [Wavy line] FENCE REMOVAL/REPLACEMENT (SEE NOTE 3)
 - [Hatched] VEGETATIVE RESTORATION (SEE NOTE 3)

- NOTES:
- REFER TO DRAWING 2 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
 - FOLLOWING COMPLETION OF EXCAVATION ACTIVITIES (DEPICTED ON FIGURE 8), AREAS SHALL BE RESTORED TO PRE-EXCAVATION GRADES (UNLESS OTHERWISE SPECIFIED) AND SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS AND THE SITE RESTORATION PLAN REFERENCED IN NOTE 3.
 - A SITE RESTORATION PLAN WILL BE DEVELOPED TO ADDRESS THE VEGETATIVE RESTORATION OF THE DESIGNATED AREAS. THAT PLAN WILL ALSO ADDRESS THE REPLANTING OF TREES AND SHRUBS, SUBJECT TO MODIFICATION BASED ON CONSULTATION WITH EPA AND DISCUSSIONS WITH THE PROPERTY OWNERS.
 - HAY BALES/SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE.
 - CONTRACTOR SHALL COORDINATE SURFACE RESTORATIONS WITH OTHER TREE PLANTING/LANDSCAPING ACTIVITIES (ONCE DETERMINED). UNLESS OTHERWISE DIRECTED BY GE, SURFACE RESTORATION SHALL NOT BE CONDUCTED UNTIL ALL OTHER LANDSCAPING ACTIVITIES HAVE BEEN COMPLETED.

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c*, [4-c*, [A]VELIMIT*, [F]LOOD, [G]ROUP-4C
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW LAF LJP
N/40122006/RDRA/CONTRACT/40122G05.DWG

Graphic Scale 1"=30' 30' 0 30' 60'		Professional Engineer's Name Professional Engineer's No. State Date Signed		BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists	GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES SITE RESTORATION PLAN FOR GROUP 4B	BBL Project No. 401.22 Date AUGUST 2005		11
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.		Project Mgr. ACC Designed by Drawn by DMW				Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120		

NOTE - ALTHOUGH NOT SHOWN ON DRAWING (FOR CLARITY PURPOSES), CONTRACTOR SHALL INSTALL A CONTINUOUS HAY BALE/SILT FENCE ROW ADJACENT TO AND ALONG THE ENTIRE EDGE OF EXCAVATIONS ADJACENT TO THE RIVERBANK. THE SPECIFIC LOCATION OF THE HAY BALE/SILT FENCE SHALL BE FIELD DETERMINED AND APPROVED BY GE.

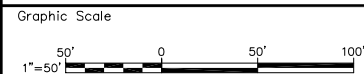
CONTRACTOR SHALL REPLACE
CONCRETE GUARDRAILS

CONTRACTOR SHALL RESTORE PATH
TO PRE-CONSTRUCTION CONDITIONS

CONTRACTOR SHALL RESTORE PATH
TO PRE-CONSTRUCTION CONDITIONS

APPROXIMATE
LOCATION OF
50' WIDE
WMCO
EASEMENT

X: 40122X00, X01.DWG
L: ON=*, OFF=REF*, [3-c*, [4B-RIVER*, [4-c, [A]VELIMIT*, [FLOOD, [GROUP-4B
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW KMD LAF
N/40122006/RDRA/CONTRACT/40122G08.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init
NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			

Professional Engineer's Name

Professional Engineer's No.

State Date Signed

Project Mgr. Designed by Drawn by
ACC DMW

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES

SITE RESTORATION PLAN FOR GROUP 4C

TECHNICAL DRAWINGS



LEGEND

- APPROXIMATE PARCEL BOUNDARY
- I6-1-63** RESIDENTIAL PROPERTY PARCEL ID
- I6-1-62** NON-RESIDENTIAL PROPERTY PARCEL ID
- BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)
- AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- SANITARY MANHOLE
- STONE WALL/RETAINING WALL
- WOODEN FENCE
- WIRE FENCE LINE
- CHAIN LINK FENCE
- EASEMENT
- ELEVATION CONTOUR
- SANITARY SEWER
- OVERHEAD WIRES
- WATER SERVICE
- GAS SERVICE
- EDGE OF BUSHES/HEDGE
- SHRUB
- CONIFEROUS TREE
- DECIDUOUS TREE
- HAY BALE/SILT FENCE 1
13
- VEGETATIVE RESTORATION (SEE NOTE 3)

NOTES:

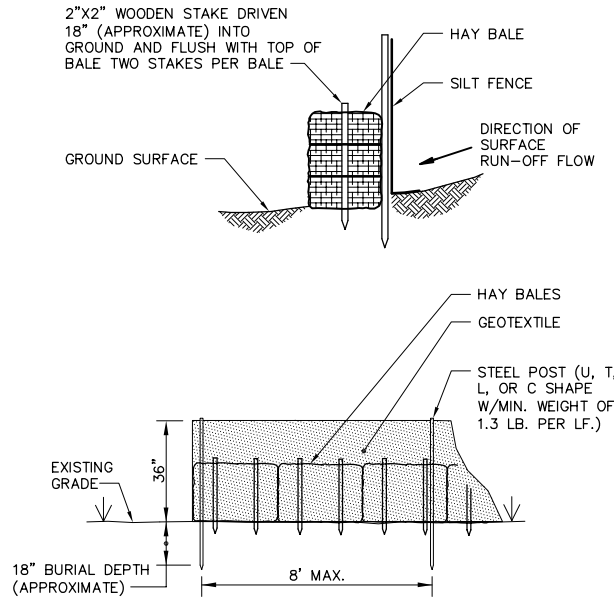
- REFER TO DRAWING 3 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
- FOLLOWING COMPLETION OF EXCAVATION ACTIVITIES (DEPICTED ON FIGURE 9), AREAS SHALL BE RESTORED TO PRE-EXCAVATION GRADES (UNLESS OTHERWISE SPECIFIED) AND SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS AND THE SITE RESTORATION PLAN REFERENCED IN NOTE 3.
- A SITE RESTORATION PLAN WILL BE DEVELOPED TO ADDRESS THE VEGETATIVE RESTORATION OF THE DESIGNATED AREAS. THAT PLAN WILL ALSO ADDRESS THE REPLANTING OF TREES AND SHRUBS, SUBJECT TO MODIFICATION BASED ON CONSULTATION WITH EPA AND DISCUSSIONS WITH THE PROPERTY OWNERS. THAT PLAN WILL ALSO EVALUATE THE NEED FOR SPECIAL RESTORATION MEASURES IN THE AREA DESIGNATED AS "POOL" AND, IF APPROPRIATE, WILL INCLUDE SUCH MEASURES.
- HAY BALES/SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE.
- CONTRACTOR SHALL COORDINATE SURFACE RESTORATIONS WITH OTHER TREE PLANTING/LANDSCAPING ACTIVITIES (ONCE DETERMINED). UNLESS OTHERWISE DIRECTED BY GE, SURFACE RESTORATION SHALL NOT BE CONDUCTED UNTIL ALL OTHER LANDSCAPING ACTIVITIES HAVE BEEN COMPLETED.

BBL Project No.
401.22

Date
AUGUST 2005

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

GENERAL NOTES - DRAWINGS 1 THROUGH 12



NOTES:

1. UNTIL SUCH TIME THAT ALL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED AND BACKFILL MATERIAL HAS BEEN PLACED IN ALL AREAS, SILT ACCUMULATIONS ADJACENT TO EROSION CONTROL MEASURES SHALL BE IMMEDIATELY REMOVED AND DISPOSED WITH SOILS SUBJECT TO TRANSPORT AND DISPOSAL.
2. THE CONTRACTOR SHALL INSPECT INSTALLATION AND REMOVE SILT AND OTHER DEBRIS AS IT ACCUMULATES.
3. HAY BALES/SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE. CONTRACTOR SHALL RESTORE SURFACE AREA.
4. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE HAY BALES/SILT FENCING UNTIL RESTORATION ACTIVITIES ARE COMPLETE.

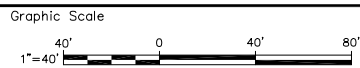
HAY BALE/SILT FENCE

NOT TO SCALE

①

1. THE SOILS SUBJECT TO EXCAVATION AND HANDLING CONTAIN PCBs AND OTHER HAZARDOUS CONSTITUENTS AND SHOULD BE HANDLED IN ACCORDANCE WITH APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING APPROPRIATE HEALTH AND SAFETY MEASURES FOR ITS EMPLOYEES AND SUBCONTRACTORS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING SURVEY CONTROL AND VERIFYING EXISTING GRADES AND POST-EXCAVATION ELEVATIONS. GE WILL IDENTIFY LOCATION(S) AND ELEVATION(S) OF SUITABLE BENCHMARKS TO BE USED FOR SURVEY CONTROL.
3. THE DRAWINGS MAY NOT INDICATE ALL SURFACE FEATURES SUBJECT TO REPLACEMENT AS PART OF SITE RESTORATION ACTIVITIES. THIS WILL NOT RELIEVE THE CONTRACTOR FROM REMOVING AND REPLACING (IF NECESSARY) ANY AND ALL SUCH ITEMS AT NO ADDITIONAL COST TO GE.
4. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL (SHOWN OR NOT SHOWN) ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES THAT MAY EXIST WITHIN THE PROJECT LIMITS PRIOR TO COMMENCEMENT OF WORK.
5. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES FOR THE TEMPORARY PROTECTION OF (AND/OR REMOVAL AND REPLACEMENT, AS NECESSARY, AS DETERMINED BY THE APPROPRIATE UTILITY COMPANY) ANY UTILITY POLES, GUY WIRES, UNDERGROUND UTILITIES, AND/OR OVERHEAD WIRES THAT FALL WITHIN THE LIMITS OF EXCAVATION.
6. EXCAVATION LIMITS SHOWN ON THE TECHNICAL DRAWINGS REPRESENT SOILS THAT REQUIRE REMOVAL TO ACHIEVE THE NECESSARY REMOVAL ACTION OUTCOME. ADDITIONAL REMOVAL THAT MAY BE NEEDED TO FACILITATE CONSTRUCTION ACCESS, RESTORATION, ETC. HAS NOT BEEN IDENTIFIED.
7. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO AVOID DAMAGE TO STRUCTURES THAT ARE NOT SUBJECT TO REMOVAL AND REPLACEMENT AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL REPAIR ANY STRUCTURAL OR EXTERNAL DAMAGES TO SUCH STRUCTURES AT NO ADDITIONAL COST TO GE.
8. THE CONTRACTOR SHALL COORDINATE SITE ACTIVITIES TO MINIMIZE INFRINGEMENT UPON NORMAL TRAFFIC FLOW ON ADJACENT ROADWAYS.
9. ABOVEGROUND PORTIONS OF ITEMS SUBJECT TO REMOVAL AND REPLACEMENT TO ACCOMMODATE EXCAVATION ACTIVITIES (E.G., FENCING, ETC.) MAY BE SALVAGED FOR REUSE UPON APPROVAL BY GE OR GE'S REPRESENTATIVE. APPROVED SALVAGED MATERIALS MAY BE USED WHEN RECONSTRUCTING THESE ITEMS. BELOW-GRADE COMPONENTS AND/OR COMPONENTS THAT HAVE CONTACTED SOILS SUBJECT TO EXCAVATION SHALL BE HANDLED AND DISPOSED OF WITH THE ASSOCIATED SOILS. ALL SUCH ITEMS SHALL BE BROKEN INTO SUFFICIENTLY SMALL PIECES (IF NECESSARY) TO BE ACCEPTABLE FOR TRANSPORT AND DISPOSAL WITH THE SOILS. BELOW-GRADE COMPONENTS SHALL BE REPLACED AS PART OF SITE RESTORATION ACTIVITIES.
10. THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.
11. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK AND APPROPRIATE EQUIPMENT FOR DUST SUPPRESSION WITHIN SOIL EXCAVATION, HAUL ROADS, AND LOADING AREAS. THESE AREAS SHALL BE WATERED BASED ON VISUAL OBSERVATIONS, THE RESULTS OF AIR MONITORING ACTIVITIES, AND/OR DIRECTION BY GE OR GE'S REPRESENTATIVE.
12. ON A DAILY BASIS, THE CONTRACTOR SHALL ENSURE PERIMETER AIR MONITORING (TO BE PERFORMED BY OTHERS) IS BEING PERFORMED PRIOR TO THE START OF EXCAVATION OR OTHER EXISTING SOIL HANDLING ACTIVITIES.
13. THE HORIZONTAL LIMITS OF EXCAVATION ACTIVITIES WILL BE PHYSICALLY DELINEATED IN THE FIELD BY THE CONTRACTOR. WITHIN THESE LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTING AND VERIFYING THE SPECIFIED DEPTH OR ELEVATION OF EXCAVATION.
14. THE CONTRACTOR MAY CONSTRUCT TEMPORARY SOIL STOCKPILES FOR EXCAVATED MATERIALS AT AREAS AND OF VOLUMES APPROVED BY GE OR GE'S REPRESENTATIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING PERIMETER EROSION AND SEDIMENTATION CONTROLS (IN THE FORM OF SILT FENCING/HAY BALES AS INDICATED), RUN-OFF WATER COLLECTION, AND DUST SUPPRESSION IN THIS AREA. THE CONTRACTOR SHALL COVER THE STOCKPILED MATERIALS WITH POLYETHYLENE LINERS WHEN NO ACTIVITIES ARE BEING PERFORMED IN THE STOCKPILE AREA.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTING EXCAVATED/REMOVED MATERIALS TO THE APPROPRIATE OPCA. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THREE DAYS NOTICE TO GE OR GE'S REPRESENTATIVE PRIOR TO TRANSPORTATION OF EXCAVATED/STOCKPILED MATERIALS TO THE OPCA. THE CONTRACTOR IS REQUIRED TO PROVIDE NO LESS THAN 32 TRUCK LOADS OF MATERIAL, CONSISTING OF NO LESS THAN 10 CUBIC YARDS PER LOAD, PER DAY WHEN TRANSPORTING MATERIALS TO THE OPCAS.
16. CONTRACTOR SHALL INSTALL AN INTERIM COVER (E.G., POLYETHYLENE SHEETING) OVER WORK AREAS WHERE EXCAVATION ACTIVITIES HAVE BEEN INITIATED BUT ARE NOT YET COMPLETED. THE INTERIM COVER SHALL BE PROPERLY ANCHORED TO RESIST WIND FORCES AND PREVENT STORMWATER FROM ENTERING SUCH WORK AREAS.
17. DRIVEWAYS, CONCRETE SURFACES, PLANTERS AND/OR OTHER ITEMS SUBJECT TO REMOVAL AND REPLACEMENT SHALL BE RECONSTRUCTED TO SIMILAR DIMENSIONS AND APPEARANCE AS THE ORIGINAL ITEM. PAVEMENT SUBJECT TO PARTIAL REMOVAL SHALL BE REMOVED VIA SAW-CUT. RESTORATION SHALL MEET ALL LOCAL AND/OR STATE BUILDING CODES. CONTRACTOR SHALL OBTAIN ALL APPROPRIATE BUILDING PERMITS ASSOCIATED WITH RESTORATION ACTIVITIES.
18. UPON BACKFILLING OF EXCAVATED AREAS, THE CONTRACTOR SHALL MAINTAIN IN PLACE OR INSTALL ADDITIONAL EROSION CONTROLS IN THE LOCATIONS INDICATED ON EACH WORK SITE DRAWING. THE EROSION CONTROLS WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE.
19. BACKFILLED AND RESTORED AREAS WILL BE SUBJECT TO FINAL SURVEY VERIFICATION (BY THE CONTRACTOR). THE CONTRACTOR SHALL REPAIR ANY ITEMS THAT ARE NOT RESTORED TO THE LOCATIONS AND/OR ELEVATIONS REQUIRED BY THIS CONTRACT.
20. THE CONTRACTOR SHALL RESTORE TO PRE-REMEDIATION CONDITIONS ALL SUPPORT AREAS THAT ARE IMPACTED BY REMEDIATION ACTIVITIES, INCLUDING EQUIPMENT AND MATERIALS STORAGE AREAS, SOIL LOADING AND STAGING AREAS, AND PARKING AREAS.
21. ALL EQUIPMENT OPERATED WITHIN THE LIMITS OF EXCAVATION SHALL BE CLEANED PRIOR TO USE OR STORAGE ELSEWHERE ON THE SITE OR TRANSPORTED OFF-SITE. A CONTAINED/LINED WHEEL WASH AREA SHALL BE PROVIDED BY THE CONTRACTOR TO BE USED AS NECESSARY FOR CLEANING EXCAVATION EQUIPMENT AND/OR TRANSPORTATION VEHICLES PRIOR TO THEIR REMOVAL FROM THE WORK SITE. WATER USED TO CLEAN EQUIPMENT SHALL BE RESTRICTED TO AND COLLECTED WITHIN A DESIGNATED EQUIPMENT CLEANING AREA. ALL SUCH WATERS SHALL BE CONTAINERIZED AND TRANSPORTED BY THE CONTRACTOR FOR APPROPRIATE DISPOSAL/TREATMENT.
22. SELECT SITE FEATURES MAY OR MAY NOT BE SHOWN ON DRAWINGS (E.G., ADDITIONAL CONCRETE PADS, MANHOLES, ETC.). CONTRACTOR SHALL PROTECT THESE FEATURES.
23. WHEN EXCAVATING MATERIALS FROM A GIVEN AREA CONTAINING BOTH TSCA AND NON-TSCA MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEGREGATING THESE MATERIALS (ACCORDING TO THEIR TSCA OR NON-TSCA CLASSIFICATION) FOR THE PURPOSES OF MATERIAL HANDLING, TEMPORARY STAGING, TRANSPORT, AND DISPOSAL.
24. WITHIN THE LIMITS OF EXCAVATION, THE CONTRACTOR SHALL RESTORE ALL PREVIOUSLY VEGETATED AREAS BY PLACING AND COMPACTING FILL MATERIALS (TO ACHIEVE A GRADE OF APPROXIMATELY 6 INCHES BELOW PRE-REMOVAL GRADE, WHERE APPROPRIATE), TOPSOIL, AND THEN SEED AND MULCH. DRIVEWAYS, STEPS, CONCRETE SURFACES, AND OTHER SURFACES IMPACTED BY EXCAVATION ACTIVITIES SHALL BE RESTORED TO THEIR ORIGINAL LOCATION, ELEVATION, AND CONDITION. OTHER SURFACE FEATURES SHALL BE REPLACED OR RESTORED AS INDICATED. ADDITIONAL RESTORATION DETAILS WILL BE PROVIDED IN THE FORTHCOMING SITE RESTORATION PLAN, WHICH WILL BE SUBMITTED AS PART OF THE FORTHCOMING SUPPLEMENTAL INFORMATION PACKAGE.

L: ON=*, OFF=REF*
P: PAGESET/SYR-CDL
8/26/05 SYR-85-DMW LAF LJP
N/40122006/RDRA/CONTRACT/40122G09.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions		Init
THIS DRAWING IS THE PROPERTY OF BLASLAND, BOUCK & LEE, INC. AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF BLASLAND, BOUCK & LEE, INC.				

Professional Engineer's Name		
Professional Engineer's No.		
State		Date Signed
Project Mgr. ACC	Designed by	Drawn by DMW

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR THE PHASE 4 FLOODPLAIN PROPERTIES

GENERAL NOTES AND DETAILS

TECHNICAL DRAWINGS

BBL Project No. 401.22
Date AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

13